

**Vocationalisation of Secondary Education in Zimbabwe:
a theoretical and empirical investigation**

By

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Abstract

This study investigates recent attempts to vocationalise secondary education in Zimbabwe in relation to the issues surrounding the provision of school-based vocational education in developing countries. Focusing on the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) pilot schemes, it examines the apparent conflict between policies advocating vocationalisation of secondary education and the views emerging from international literature questioning the efficacy of such policies. It is contended in the study that empirical evidence confirming the 'fallacy' of school-based vocational education only shows that it does not achieve its intended goals without explaining why this is the case.

The current study examines the issues surrounding the provision of school-based vocational education from both theoretical and empirical perspectives. It is concluded from the theoretical discussion that the unsatisfactory labour market outcomes of school-based vocational education in post-colonial countries are a result of socio-economic and political factors which continue to reflect 'low-participation' practices in the inherited economic systems.

Fieldwork findings seem to disprove the commonly held notions about vocational education. Although pupils' high educational and career aspirations were consistent with the arguments from literature, pupils still aspired to technical occupations related to their NFC courses. Teachers and Education Officers were positive about the NFC, even though they were sceptical about the opportunities existing in the formal employment sector. There were conflicting views regarding what pupils, teachers and Education Officers perceived as the goals of the NFC and how useful they thought it was in meeting the different objectives.

The study concludes that contrary to the viewpoint of the 'vocational school fallacy', vocational education has a crucial role to play in empowering pupils and enabling them to join either the formal or informal productive sectors in attempts to transform and democratise the inherited 'low-participation' economic system in Zimbabwe.

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Chapter 1: Introduction

1.1 Purpose and context of the study

This study investigates recent attempts to vocationalise secondary education in Zimbabwe in relation to the issues surrounding the provision of school-based vocational education internationally. It examines whether the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) confirm the 'fallacy' of school-based vocational education that is depicted in the 'vocationalisation debate'. In the current study the term 'vocationalisation debate' refers to the controversy arising from international literature concerning the provision of school-based vocational education in developing countries, particularly since Foster's (1965b) 'Vocational School Fallacy'. Focusing on a post-colonial developing country, it examines the apparent conflict between policies advocating vocationalisation of secondary education and the views emerging from international literature questioning the efficacy of such policies.

Attempts to make school curricula vocationally oriented have permeated education policies in both the colonial period and independent Zimbabwe. Successive education plans throughout the colonial period stressed vocational education for Africans, even though it was persistently rejected by both parents and pupils. Industrial education during the colonial period was intended to prepare most of the few Africans in formal education as semi-skilled workers under 'white' supervision and to ensure that 'black' children would not become 'overeducated'. Colonial education systems were comparable with industrialised western European systems, which were highly differentiated, separating pupils by social class characteristics. However, social classes in colonial

Zimbabwe were largely based on racial identity in which Africans were generally regarded as a social under-class to the minority white settlers.

The fact that the vocational education emphasised during the colonial period was not meant to make Africans highly skilled was apparent in the lack of post-school opportunities to train in highly-skilled trades. For instance, apprenticeship training offered at the Harare and Bulawayo Polytechnics was largely inaccessible to black school leavers. The yearly average of African school-leavers registered for apprenticeship training between 1961 and 1976 was only 6.3 per cent (Mutumbuka, 1979). The emphasis on industrial and practical subjects which were limited to the acquisition of low-skills by African children was a common phenomenon in most colonial states. African parents and pupils therefore despised and resisted colonial vocational education because it was meant to keep them out of contention for the viable jobs on the labour market. Their negative attitude towards industrial and craft subjects was reinforced by the fact that academic rather than technical and vocational qualifications led to better opportunities in higher education and on the labour market.

After the attainment of political independence in 1980, the provision of vocational education became one of the key policy issues in the new educational reforms. The new government intended this type of education to *enhance* rather than *restrict* pupils' competency and opportunities on the labour market. It regarded education as a mechanism to transform the inherited political and socioeconomic infrastructures and create a more egalitarian society. The 'marrying of theory and practice', perceived along socialist lines, became the new emphasis in educational policies. The introduction of the

Education With Production (EWP) concept soon after independence and the subsequent launching of the New Structure and Content of Education through the 1986 Education Act described in Chapter 6, illustrate how vocational education emerged as one of the key educational reform policies after the attainment of independence.

Post-independence vocationalisation was not only a response to the manpower requirements of the inherited industrial sector, but was also intended to transform and expand it. Self-employment was particularly emphasised since the existing formal employment sector could only absorb a minute proportion of school-leavers. Since most pupils left school after secondary education, it was believed that providing them with pre-vocational skills would ensure a smoother transition from school to the world of work. Also, this would provide a potential skilled workforce that was deemed necessary for industrialisation and economic development. It was believed that the abundance of skills would stimulate productivity, economic growth and solve school-leaver unemployment.

In its annual review of manpower, the Zimbabwe Ministry of Labour, Manpower Planning and Social Welfare (1983) pointed out that there was a need to introduce a greater component of technical education into secondary school curricula. This education was not regarded as terminal, but was to form a pre-requisite for later specialisation in technical areas in the post-secondary period. The first President of Zimbabwe commented in his official opening speech at one of the Education With Production (EWP) pilot schools that:

The days are past when any student possessing an 'O' level certificate could walk out of the classroom and get a job. Today those leaving Form Four must be prepared to create their own jobs. They must be given the technical skills as well as financial management training to set up their own cooperatives and industries. (Banana, in ZIMFEP, 1984)

While official policy continues to advocate the inclusion of vocationally oriented courses in school curricula and making all school learning practical-oriented, several factors seem to mitigate against these ideals. The bias that developed during the colonial era against technical and craft subjects continues to prevail, though to a lesser extent. It is argued in the current study that such biases only persist when vocational education is not perceived to lead to higher education or employment opportunities. It is not clear whether parents, teachers, headmasters and Ministry of Education officials perceive pre- and post-independence vocational education differently. The current study contends that considering the age of pupils in school today, their views are more likely to be influenced by current labour market opportunities rather than colonial experiences. Nevertheless, institutional recruitment practices and employment patterns remain entrenched in colonial legacies which accorded a low status to pupils with vocational qualifications.

In spite of its limited success in addressing school leaver unemployment, vocational education has remained at the top of education policies in Zimbabwe. The vocationally oriented F2 secondary schools were discontinued at independence because they were unpopular with both parents and pupils. Education With Production (EWP) was instituted by the newly independent government "... to harmonise education with national goals and demands for high level manpower needs" (Minister of Education, in Gustafsson, 1987, p. 138). It too was largely unsuccessful and was discontinued as a

pilot scheme. Nevertheless, the government of Zimbabwe (GOZ) reaffirmed its commitment to the vocational education policy through the 1986 Education Plan in which vocational education was to be compulsory for all pupils in secondary school, giving rise to the introduction of the Zimbabwe National Craft Certificate (ZNCC) as a scheme to pilot this policy.

The ZNCC was only offered for two years before its demise. It was replaced by the National Foundation Certificate (NFC). The NFC is still operating at selected pilot schools and government policy continues to reiterate vocationalisation as a priority in its educational reforms. The NFC is mainly intended to equip pupils with skills that are relevant to the labour market, although it is also meant to provide pre-vocational skills for those intending to pursue further education or training. It emphasises practical work and regards work-experience as a crucial component of pupils' education. Unlike previous programmes, both the ZNCC and the NFC stress the need to liaise with the formal employment sector in determining curricula and validation of the certificates. The assumption of these pilot schemes appears to be that by involving industry, employers will recognise the vocational qualifications and be more willing to recruit school leavers for either employment or training. However, the success of the new initiative in attaining this goal is still to be seen.

The limited success of school-based vocational education appears to be an international trend. Vocational education programmes in both developing and developed countries have largely not met the expectations of policy makers and pupils graduating from them. In developing countries however, the imperatives to orient school curricula to meet

manpower requirements and economic development seem overwhelming given the chronic shortages of skilled personnel, prevailing trade patterns on the global markets and increasing technological and economic dependency of developing countries on the industrialised nations of the north.

Attempts to use school curricula to rectify this situation have come under increasing criticism and vocationalisation of secondary education has become one of the most contentious areas of post-independence reform policies. Although the 'vocationalisation debate' has intensified in recent years, the controversy surrounding the provision of technical and practical subjects as part of formal schooling has a much longer history. Attempts to emphasise vocational rather than academic education in African schools were prevalent even though they were persistently contested throughout the colonial era.

Initial development thinking among aid agencies was that less developed countries (LDCs) needed to shift from academically-oriented education systems 'adopted' from industrialised countries. Academic education was believed to be of limited relevance to development needs of LDCs. They were therefore urged to vocationalise or diversify their education. Throughout the 1960s developing countries were urged and received financial aid from bilateral and multilateral aid agencies to provide technical, agricultural and other practical subjects. From the early 1960s to the mid-1970s, the World Bank was the largest source of international financial support for vocational education and training. "More than 20 percent of education lending during this period was for vocational and diversified secondary schools" (World Bank, 1991, p. 64). The UNESCO sponsored 1961 Conference of African Ministers of Education stressed that vocational

subjects were an essential component of school curricula. Support for the provision of vocational and technical education was reaffirmed at another UNESCO-backed conference in Harare in 1982 at which African member states were urged to implement technical and vocational education programmes and make schooling more relevant to the world of work by incorporating productive work in school curricula (Urevbu, 1988).

These views were echoed in Harare in 1989 at a SADCC conference addressing the perennial problem of education and employment and whose theme was aptly referred to as '*Defusing the time bomb?*'. Jointly sponsored by the International Foundation For Education With Production and the Dag Hammarskjold Foundation, the conference was attended not only by SADCC countries but also by delegates from China, Cuba, India, Mauritius, the United Kingdom, the World Bank and UNESCO. The conference called for stronger regional cooperation and donor assistance "... to work out concrete strategies to ensure that education becomes the productive occupation that it has long been urged to be" (International Foundation For Education With Production, 1990, p. 301). Vocationalisation of school curricula was particularly emphasised.

While most developing countries continue to hold these views, donor agencies have increasingly expressed concern at the apparent lack of success of such programmes in alleviating youth unemployment, improving agricultural production and the quality of rural life and in boosting economic development. The World Bank in particular has shifted from its support for vocational education, arguing that this type of education is too expensive, does not yield the expected returns and is therefore not cost-effective. Based on studies it commissioned to assess programmes in different countries, the Bank

started to shift its interest from the funding of vocational education to basic education, as enunciated in its policy paper (World Bank, 1991). These views have been reiterated widely and are at the heart of the controversy surrounding vocationalisation policies in developing countries. The Bank categorically states in its policy paper that:

Bank lending should strengthen the quality of, and access to, academic secondary education, rather than prevocational courses. ...For secondary education, given a poor record of performance, the diversification of curricula by adding vocational courses should be avoided. (World Bank, 1991, p. 68)

In Zimbabwe as in most developing countries, government attempts to vocationalise secondary education have been persistent in spite of the increasing literature denouncing such policies. What continues to motivate governments in developing countries to vocationalise school curricula in spite of their restricted budgets baffles sceptics, particularly educational economists who are adamant that it is impetuous to follow such policies. Governments continue to emphasise the provision of technical and vocational education as a response to escalating youth unemployment that is exacerbated by their declining economies and the increasing domination of world markets by the industrialised countries. While they may agree that vocational education is expensive in comparison to other areas of school curricula, they also regard it as an investment in human capital for boosting economic development and reducing unemployment. These views have been contested by critics who argue that the relationship between education generally and economic development is dubious.

Although governments in most developing countries continue to vocationalise their school curricula, funding for such programmes has been seriously reduced or completely

curtailed by donor agencies. This has aggravated the situation of vocational education programmes in most developing countries. Lack of funds now seems to obscure any possible success of these programmes, thereby confirming the views that vocationalising school curricula is not viable. Assessing the intrinsic worth of specific programmes is now even more problematic since lack of financial support has become a major constraint.

It is contended in the current study that while it is necessary to take into account the financial implications of providing educational programmes, costs are not a sufficient criterion for deciding whether or not to pursue particular policies. Most studies denouncing vocationalisation policies seem to take as their main consideration, the costs involved in providing vocational education in relation to the observed labour market outcomes for pupils graduating from these programmes. However, the current study takes the view that the long term effects to individual earnings or economic development cannot be ascertained by simply assessing the immediate labour market outcomes of specific programmes. Studies based on the labour market outcomes of vocational education fail to acknowledge that recruitment practices, labour market segmentation and other political and socioeconomic factors influence and explain why school leavers fail to get jobs. In this regard, the current study combines both theoretical and empirical approaches to investigate vocationalisation of school curricula.

The study examines vocationalisation in Zimbabwe within its historical, socioeconomic and political context. It includes a survey of developments in vocational education under colonial policies, a literature review to identify the main arguments arising from the

'vocationalisation debate', a theoretical discussion of the economic and sociological arguments emerging from the vocationalisation debate and an empirical investigation of recent attempts to vocationalise secondary education in Zimbabwe. The present study contends that by focusing on costs and labour market outcomes, previous studies have only explained the effects and not the causes of the problems besetting school-based vocational education. Such studies explain the 'status quo' without offering alternative strategies to address the goals which vocational education is intended to meet by policy makers.

1.2 Research problem

While the efficacy of vocationalising secondary education has been increasingly challenged by academics, and aid and development agencies, post-colonial states continue to emphasise the provision of school-based vocational education. In Zimbabwe, this is confirmed by the pronouncement of the 1986 Education Plan emphasising vocational education as an essential component of secondary education. However, the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) introduced successively to pilot the 1986 Education Plan have already been criticised by the World Bank (1992).

This study examines the extent to which these recent attempts to vocationalise secondary education in Zimbabwe confirm the 'fallacy' of vocationalising secondary education. It arises from the apparent conflict between persistent policies advocating the provision of school-based vocational education in post-colonial developing countries and the views emerging from international literature which question the efficacy of such policies. The

vocationalisation discourse pursued in the current study is traced from the 1961 Conference of African States on the development of education in Africa. Referred to in the current study as the 'vocationalisation debate', the discussion has attracted widespread attention and centres around Foster's (1965b) 'vocational school fallacy'.

Foster (1965b) challenged the prevailing human capital views held by development and donor agencies and also reflected in the recommendations of the UNESCO-sponsored 1961 Conference of African States in Addis Ababa. He argued that 'the inclusion of technical, vocational or agricultural education in school curricula would not check the movement of school leavers from rural to urban areas, reduce unemployment, or have any effect on the rate of economic development.' He concluded that given the high costs of vocational education, vocationalisation of school curricula was neither cost-effective nor viable in effecting social and economic changes in post-colonial states.

This view has received widespread support among academics, and aid and development agencies. Studies commissioned by the World Bank to determine the cost-effectiveness of school-based vocational education in several developing countries have confirmed the 'fallacy' of vocationalising secondary education. Psacharopoulos and Loxley's (1985) study of diversified secondary education in Colombia and Tanzania stands out as the most extensive and influential among the empirical investigations. As a result of the empirical findings from these studies, the Bank has refrained from giving financial support to school-based vocational education. The issues emerging from the vocationalisation debate are many and varied. However, there is a growing consensus that schools should concentrate on academic subjects and leave the provision of

vocational skills to be done at the workplace (Lillis and Hogan, 1983; Psacharopoulos and Loxley, 1985; and Lauglo and Lillis, eds, 1988; and World Bank, 1991). The term 'vocational fallacy' is used in the current study in reference to views suggesting 'academicising' rather than 'vocationalising' school curricula.

While the 'fallacy' appears to be receiving widespread support, this study contends that these views are based on the observed outcomes of vocational education without taking into account the underlying factors. Empirical evidence confirming the 'fallacy' shows that vocational education is not achieving the intended objectives without explaining why this is the case. The studies regard the capitalist economic systems inherited by post-colonial states as given. The cost-benefit analyses and labour market outcomes on which the studies have been based do not explain the underlying socioeconomic and political factors which determine the provision and outcomes of vocational education.

It is argued in the current study that whether or not vocationalising school curricula is a 'fallacy' depends on the economic view and development strategy that is adopted. Within the context of the inherited capitalist economic systems based on 'selection' and 'exclusion' of the majority of school-leavers, vocationalising school curricula is confirmed as a fallacy. However, where attempts are to transform these economic systems in order to democratise access to them, then school-based vocational education provides pre-vocational skills for the majority of pupils who have no access to post-school training opportunities. It is the contention of this study that school-based vocational education cannot be fully assessed without invoking the broad theoretical issues that are likely to remain concealed in short-term empirical investigations. The

current study therefore examines the theoretical assumptions underlying the 'fallacy' of vocationalising secondary education before investigating empirically whether the ZNCC and NFC pilot schemes in Zimbabwe confirm the fallacy. It focuses on one broad research question:

1.3 Research question:

To what extent is the 'vocational fallacy' a viable proposition in relation to recent attempts to vocationalise secondary education in Zimbabwe?

The term 'vocational fallacy' is used in the current study in reference to views advocating 'academicising' rather than 'vocationalising' school curricula. The current study arises from the growing consensus that schools should concentrate more on academic subjects and leave the provision of vocational skills to be done at the workplace (Lillis and Hogan, 1983; Psacharopoulos and Loxley, 1985; Lauglo and Lillis, eds., 1988; and World Bank, 1991 and 1992).

While previous studies have tended to rely on empirical evidence, the current study employs both theoretical and empirical approaches in its investigation. The theoretical investigation examines the factors and assumptions underlying vocationalisation of secondary education. It is the contention of this study that it is not sufficient to establish whether or not school-based vocational education is achieving its intended objectives without taking into account the assumptions underlying such provision and the factors influencing its outcomes. The study examines the premises on which the 'vocational fallacy' is based in relation to the factors leading to the introduction of the

ZNCC and NFC pilot schemes.

1.4 Significance of the study

As in most other post-colonial states, attempts to reform school curricula to meet post-independence individual and national expectations and aspirations have met with little success in Zimbabwe. School curricula continue to be imbued by colonial legacies, in spite of the rhetoric to the contrary. Since the attainment of political independence, continuous attempts have been made towards consolidating the autonomy of the country as an independent state. One of the main objectives of the new state is to decrease its 'dependency' on the industrialised countries which continue to control the economic system through capital and technological domination of the formal sectors. The vocationalisation of school curricula is one of the strategies intended to provide a local pool of skilled personnel to spearhead the 'indigenisation' of the productive sectors of the economy. The goal of vocationalisation is therefore not merely to prepare pupils for the existing labour market as often implied in literature, but to help transform it. The feasibility of development strategies purporting *modernisation* and lessening *dependency* are beyond the scope of the current analysis. Watson (ed., 1984) provides a comprehensive treatise of dependence and interdependence in education from an international perspective. These concepts provide a broader context in which vocationalisation of secondary education is perceived in the current study. It is contended here that the long-term effects of vocationalising school curricula cannot be ascertained with certainty through the conventional empirical studies such as those that have been commonly employed to assess the provision of vocational education, without invoking some of the broader theoretical issues.

The provision of vocational education as a response to escalating youth unemployment has been increasingly disputed. Empirical evidence from different countries has shown that attempts to reduce youth unemployment through the inclusion of technical and practical subjects as part of their schooling have been largely unsuccessful. However, the studies generally seem to regard the labour market recruitment practices as rational and assume that pupils do not get employed because they are deficient in the skills required by employers. It is argued in the current study that such studies do not take into account the political and socioeconomic factors which operate in the economic systems and labour markets, particularly in post-colonial states.

There is a general tendency by researchers and policy-makers to regard the requirements of the formal employment sector as the criterion for assessing school curricula. Disparities between school curricula and the world of work are regarded as a failure of schooling. School-leaver unemployment is blamed on schools which are said to be educating too many pupils that cannot be absorbed by the employment sector. Vocational education is assessed in terms of the requirements of industry, with little consideration of the need to empower pupils for post-school economic survival. The current study takes the premise that the purpose of vocational education should not only be to meet the needs of industry, but to transform and democratise access to it.

Although substantial literature exists concerning vocationalisation programmes in other countries, research evidence on vocational education initiatives in Zimbabwe is scarce. While data from other countries might highlight some relevant issues like implementation strategies and potential problems, it is nevertheless necessary to examine

individual programmes within specific countries. The precise goals of vocational education programmes differ from country to country. The success or failure of programmes is influenced by sociopolitical, socioeconomic and other factors that are largely country-specific. Conclusions based on studies carried out in individual countries cannot therefore be readily generalised to other situations. Although findings from the current study are not intended to be generalised, it is nevertheless possible that some characteristics identified might be applicable to other vocationalisation programmes, not only in Zimbabwe but in other developing countries. Information emanating from the study might be useful to policy makers and aid agencies as well as show the rhetoric of the 'vocational school fallacy' that has been prematurely inscribed as an epitaph to the vocationalisation debate.

1.5 Organisation of the study and chapter outline

The initial part of the thesis explores the historical developments that explain the legacies and contextual factors which seem to influence educational provision in Zimbabwe. It shows how colonial policies emphasised technical and vocational education for Africans yet school curricula remained largely academic. The literature review examines the central arguments surrounding vocationalisation of secondary education generally, but specifically in post-colonial developing countries. The theoretical discussion invokes the human capital and educational reproduction theories in order to identify the socioeconomic and political factors influencing the provision and outcomes of school-based vocational education. Fieldwork findings explore the introduction of the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) as successive pilot schemes to vocationalise secondary

education in Zimbabwe. The main arguments of the vocational 'fallacy' and their underlying theoretical assumptions are examined within the context of the ZNCC and the NFC pilot schemes. The empirical investigation focuses on the context of the ZNCC and NFC pilot schemes and the perceptions of pupils, teachers, headmasters and Ministry officials regarding the vocationalisation pilot scheme. The perceived goals of the NFC are examined in relation to the educational and career aspirations of pupils following the programme. Taking into account the socioeconomic and political factors which seem to influence educational provision, the study concludes by assessing whether fieldwork findings concerning the ZNCC and NFC pilot schemes confirms the 'vocational fallacy'. The study is divided into eight chapters as outlined below:

Chapter 1 introduces the purpose and significance of the study and outlines the background and context of the research problem. It states the main research questions and the approaches employed to investigate them.

Chapter 2 provides the historical context of school-based vocational education in Zimbabwe. It traces the origins of and developments in vocational education policies throughout the colonial period and how vocationalisation became a top priority in post-independence educational reform policies. It also discusses how African education was designed to serve the low-level 'manpower' requirements of industry during the colonial period.

Chapter 3 examines the 'vocationalisation debate' through a review of literature. It discusses vocationalisation from an international perspective but specifically as it relates

to post-colonial developing countries. The chapter identifies the major arguments emerging from the debate as economical and sociological.

Chapter 4 examines the vocationalisation debate from a theoretical perspective. It discusses the human capital and educational reproduction theories and their implications for the provision of school-based vocational education. The chapter provides the theoretical basis of the vocationalisation arguments pursued in the current study in order to identify the socioeconomic and political factors that influence vocational outcomes. Besides explaining the broader context of vocationalisation policies, the theoretical discussion also provides a conceptual framework to guide the empirical investigation.

Chapter 5 describes the fieldwork methods and procedures followed in Zimbabwe. Questionnaires and semi-structured interviews were used to collect data from schools and the two Ministries of Education. Policy documents were also collected to provide information about the context and developments in recent attempts to vocationalise secondary education. The chapter describes how the research questions were investigated from both theoretical and empirical perspectives.

Chapter 6 discusses the policy context of the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) as recent attempts to vocationalise secondary education in Zimbabwe. The chapter traces the successive introduction of the two programmes to pilot the provision of school-based vocational education and examines the assumptions underlying the provision of the successive schemes. These assumptions are compared and contrasted with those underlying the

fallacy of school-based vocational education.

Chapter 7 describes and discusses the fieldwork data regarding the ZNCC and the NFC pilot schemes. It addresses the questions regarding the relationship between pupils' background characteristics, educational and career aspirations and their views towards vocational education. Pupils responses to these questions are analysed in relation to the overall goals of the scheme and the main arguments surrounding the provision of school-based vocational education. The chapter also analyses the responses of teachers and education officers regarding their characteristics and perceptions of the pilot schemes. The perceptions of pupils, teachers and education officers involved in the vocationalisation pilot scheme are contrasted with the views arising from the vocationalisation debate.

Chapter 8 gives an overview of the study and draws the overall theoretical and empirical conclusions to the broad questions stated in chapter 1 as well as the subsidiary questions arising from the theoretical discussion. The chapter offers suggestions and recommendations with regard to current attempts to vocationalise secondary education in Zimbabwe and other post-colonial developing countries in similar circumstances.

1.6 Definition of terms

The purpose of this section is to establish the main concepts, terms and definitions, as they are used in this study. One of the problems that seems to hinder discourse in vocational education is that terms are often used interchangeably and defined variously. Also, terms that did not exist previously such as 'vocationalise' and 'vocationalisation'

have become acceptable jargon in literature. The definitions used in this study are derived from international literature on vocational education, but are also used in their context and meaning in Zimbabwe. As UNESCO (1984, p. 9) observes, "Educational terms are often linked to particular systems of education which are based on the philosophies of the societies they serve..." and may therefore not be applicable outside these systems.

1.6.1 General education

This term refers to education that is intended to develop numerative and communication skills at progressively more difficult levels and "...to transmit and encourage the acquisition of general, literary, mathematic, scientific, historical, civic, technical, social and aesthetic knowledge." (UNESCO, 1984, p. 23). It is also referred to as traditional education. This is often viewed as an alternative to vocational education, and comparisons are made to find out which of the two yields more benefits to individuals and to economic development.

1.6.2 Technical and vocational education

UNESCO (1984) defines this as education that involves, in addition to the general education, the study of technological and scientific education and the acquisition of practical skills and knowledge related to occupations in various sectors of economic and social life. Generally however, this term tends to be used interchangeably with 'technical' or 'vocational' education.

1.6.3 Technical education

This is education that is provided at secondary and tertiary levels, to prepare skilled personnel for technically oriented professions. In schools, this term is also often used in reference to practical subjects that are provided as part of the general education of pupils, without any immediate occupational aims.

1.6.4 Pre-vocational education

This term specifically refers to technical, vocational, agricultural or commercial education that is provided in schools as a preparation for further training. In essence, all school learning could be regarded as pre-vocational if it eventually leads to further training for specific vocations or occupations.

1.6.5 Vocational education

Generally, vocational education, refers to attempts by schools to prepare pupils for agricultural, industrial or commercial occupations (Lauglo and Lillis, 1988; Psacharopoulos and Loxley, 1985; Blaug, 1973 and Foster, 1965). The term 'vocational education' has however been used with several meanings. As the literature on vocational education has increased, so too have the terms used to describe it. Also, the different terms have been used interchangeably, and in different contexts, such that their meaning has become blurred (Psacharopoulos and Loxley, 1985). The terms 'industrial arts', 'vocational', 'prevocational' and 'diversified' education, have all been used to describe the provision of technical and other practical subjects within the school curriculum. The various definitions however include the notion of narrowing or even bridging the gap between education and the world of work.

The different definitions tend to suggest the purposes for which such education is intended to serve. 'Vocational education' is sometimes used in reference to instruction that is intended to prepare pupils for industrial, agricultural or commercial occupations. It is also used to describe technical and other practical subjects that are offered as part of the general education of pupils, without necessarily leading to direct employment.

Bacchus, (1988, p. 31) defines vocational education as "... efforts by schools to include in their curriculum, those 'practical' subjects which are likely to generate among the students, some basic knowledge, skills, and dispositions that might prepare them to think of becoming skilled workers or to enter other manual occupations". From this view, the role of vocational education is seen as that of orientation rather than preparation for direct employment.

UNESCO (1984, p. 23) defines vocational education as that which is "...designed to prepare skilled personnel at lower levels of qualification for one or group of occupations, trades or jobs." As with the other definitions, this is based on the intended purposes of such education. These purposes however tend to vary in relation to educational goals and conditions prevailing in different countries.

1.6.6 Diversified education

This term is often used in reference to school curricula that are 'vocationalised' or 'practicalised' through the inclusion of vocational or practical subjects. Psacharopoulos and Loxley (1985) refer to diversified education as the provision by schools of a wide range of courses, which are typically in all-academic or in all-vocational schools.

Haddad (1987) identifies two models of diversification as viewed by the World Bank:

Model I: in which "practical subjects" are introduced into a single stream (or non-vocationally based multiple streams) as one component of a general curriculum but with no direct occupational aims. Students in this case may all take the same practical subjects or choose one or more of them depending upon their availability (p.3).

Model II: Specialisation in vocationally oriented streams with direct occupational aims. This generally follows an observation period of one or two years that constitute a "pre-vocational" orientation, similar to Model I. Model II schools (sometimes labelled "comprehensive" or "multi-lateral") usually provide a common core of academic and practical course-work with increasing specialization in one academic or "occupational" field. (p.4)

1.6.7 Vocationalisation of secondary education

The term 'vocationalisation' describes attempts by schools to relate education to the world of work. It refers to the provision of vocational education at secondary school level. Such provision varies as to the intended outcomes. Pre-vocational education prepares pupils for further training, while vocational education leads to possible direct employment.

1.6.8 Vocational School Fallacy

This refers to the arguments put forward by Foster (1965b) arguing that educational and labour market outcomes are influenced by broad political, economic and social factors that lie outside the control of schools. Vocationalising school curricula to bring about economic, social and political changes was therefore a 'fallacy'.

1.6.9 Vocational Fallacy

While the issues emerging from the 'vocational school fallacy' are many and varied, the term 'vocational fallacy' is adapted in the current study to refer to views emerging from the vocationalisation debate that school curricula should be 'academicised' rather than 'vocationalised'.

1.6.10 Vocationalisation debate

What is referred to as the 'vocationalisation debate' in this study is the controversy that has developed regarding the efficacy of vocationalising secondary education, particularly in developing countries. It features the arguments supporting Foster's (1965b) 'vocational school fallacy' and the subsequent views emerging from the World Bank studies, particularly Psacharopoulos and Loxley (1985).

1.6.11 Working definition of 'vocational education'

In this study vocational education refers to the provision of practical subjects within the school curriculum in order to orient pupils into technical, commercial and other practical occupations. It includes the provision of such education as part of the general education of pupils, preparing them for further training or enabling them to enter directly into employment. It therefore incorporates terms such as technical, practical, pre-vocational and diversified education. The inclusive usage of the term is adopted in cognisance of the interchangeability of terminology in literature and in different countries by different people.

Chapter 2: Pre- and post-independence vocational education policies in Zimbabwe

2.0 Introduction

This chapter provides the political context of school-based vocational education from a historical perspective. It examines the colonial legacies that continue to influence current attempts to vocationalise secondary education in Zimbabwe. The chapter traces developments in vocational education policies throughout the colonial period and how vocationalisation became a top priority in post-independent educational reform policies. It is contended in the current study that the colonial education system inculcated attitudes and views towards education that continue to prevail in the post-independent period. The legacies of the colonial period influence not only policy but the perceptions that teachers, parents, employers and even government hold.

One of the major challenges confronting education planners and curriculum developers is to transform the inherited education system to respond to post-independence expectations of parents, pupils and the economy. It is argued in this study that the contradiction created by the maintenance of the capitalist economic structure while attempting to introduce 'egalitarian' social policies based on the Marxist/Leninist doctrine is one of the key constraints to post-independence social policies in Zimbabwe.

2.1 Colonial policies and developments in formal education

"The history of formal education for Africans in Rhodesia is synonymous with the

history of Christian missions." (Dorsey, 1975, p.39). Robert Moffat of the London Missionary Society, opened the first school for Africans at Inyati in 1859, more than 30 years before the first European settlers came to Zimbabwe. By 1883, the missionaries had begun to hold formal examinations for their pupils.

Although the first mission station was established as early as 1859 at Empandeni by the Jesuit Fathers and several others followed soon afterwards, missionaries only started making notable progress in both educational and evangelical work, after the arrival of the European settlers in 1890 (Dorsey, 1975; Atkinson, 1972). Local traditional leaders resisted early missionary influence, including education, which posed a threat to their traditional institutions, beliefs and practices. This resulted in the rather sluggish start of educational development. This situation changed after the suppression of local resistance and the establishment of colonial rule and political control. African interest in western education increased, though slowly at first (Dorsey, 1975).

Missionaries provided most of the educational facilities, despite numerous attempts by colonial administrators to restrict the expansion of African education. They provided most of the necessary financial resources. Government's involvement in African education was to give its consent to the starting of schools and offering grants of land to various religious groups operating in the country (Mlambo, 1972). Although the provision of education for Africans remained mainly in the hands of missionaries, the colonial government increasingly imposed controls on mission schools and regulated their growth through the grant-in-aid system. Only those mission schools which agreed to comply with the colonial policies, could get land and the meagre financial assistance

from government.

Missionary interest in African education was mainly motivated by their desire to convert the indigenous people to the Christian faith. The 1937 Survey of African Education concluded that Mission Churches regarded education as essential to evangelism, and that missionaries saw its provision among the indigenous African as essential in their bid to spread Christianity in the country. Missionaries needed a literate African population that could help to spread the gospel and perform various other tasks in mission stations.

Missionaries realised that what attracted Africans mainly at mission stations were not churches but schools. Many people complied with church practices such as 'baptism' and 'confirmation', so that they could secure school places. The most successful mission stations were those which ran schools. "In places where schools withered away, the church too tended to die" (Zvobgo, 1986). It therefore became practice that whenever mission stations were established, school facilities were provided too. Further impetus to the expansion of educational facilities resulted from the rivalry and competition that developed between different religious groups. They competed to spread Christianity and recruit a larger share of converts to their denominations.

After the arrival of European settlers, missionaries found it easier to spread their influence among the indigenous people. Under the protection of colonial rule, they could now reach communities which were previously inaccessible due to the hostility of local people who resisted the intrusion by missionaries into their traditional way of life. Also, the new exchange economy introduced by the settlers created an increasing demand for

education among the Africans. Any hope for economic, social or political advancement was only possible through the acquisition of formal European education. Since missionaries were providing this possibility, it improved their image in the eyes of local communities and made their work easier. The demand for schools soon exceeded the capacity of missionaries to provide them.

Missionaries made notable progress in providing educational facilities for Africans during the period between 1890 and 1930. The number of schools approved by government rose from three to 115 by 1910; 750 by 1920 and 1422 by 1930 (Zvobgo, 1986). As the demand for more education was increasing among Africans, the settler regime stepped in to control its provision and ensure that missionaries would not 'overeducate' them. The colonial government did not want an educated African population which would challenge its hegemony and legitimacy. However, they could not prevent the missionaries from providing schools for the indigenous people. The 1937 Survey of African Education hinted that preventing the missionaries from providing education for Africans would "... not ultimately prevent the Native learning to read and write: but would deprive us of a valuable agency for guiding the education that the Native is receiving." This line of thinking permeated education policies of successive administrators throughout the colonial period.

White settlers needed a literate African labour-force for their agricultural and industrial sectors. They also regarded missionary influence as a means of social control over the African population (Dorsey, 1975 and Atkinson, 1972). The people who had been converted to Christian faith and received some western formal education were initially

regarded by the settlers as more receptive to European influence and less hostile. The rise of African nationalism and the subsequent political confrontation by black leaders after the second world war, was to prove the opposite.

While supporting the need to provide some educational facilities for Africans, colonial administrators were critical of what they perceived as "bookish education" which missionaries were providing. In their opinion if Africans were to be educated at all, the education had to be of a practical nature related to agriculture and industry to fit them as labourers, but not to the extent where they could compete with Europeans (Dorsey, 1975 and Atkinson, 1972). Zvobgo (1986) notes that "Power was given to the Chief Native Commissioner ... to keep mission school activities within acceptable limits ..." (p.16).

... Africans were to be given an education ... but not equal to that of whites. While providing the semi-skilled labour necessary for industrial development, African education was also intended to maintain the existing racial distinctions and therefore to prepare black manpower for customary prescribed roles." (O'Callaghan and Austin, 1977)

Colonial administrators imposed restrictions on both the quantity and quality of African education. Not only did they control the number of education facilities provided or children enrolled, but they also made vigorous attempts to weaken the content and curriculum of African education. The education which Africans were to receive was spelt out by the 1911 Commission of Inquiry into Native Affairs, which recommended that emphasis was to be on industrial instruction. While providing the semi-skilled labour-force necessary for industrial development, industrial training in African schools was confined to an elementary knowledge of agriculture, carpentry and building.

Successive colonial administrators did not want black pupils to acquire advanced knowledge and skills which would bring them in competition with whites on the labour-market.

Accepting the inevitability of providing some academic education, the 1911 Commission of Inquiry asserted, "... we... should retain control of this kind of education..." and added that it had to be directed into "approved paths". It urged the promotion of agricultural instruction, demonstration plots, and industrial training limited to handicrafts and those trades needed in the rural areas or to prepare Africans as assistants to European craftsmen. "... the country wanted the African's labour, not his intelligence." (Parker, 1960). As Chidzero (1977) points out, African education was designed to produce, or to lead to semi-skilled employment that would maintain the master-servant relationship with the whites.

The government adopted recommendations made by the 1911 Commission of Inquiry. These influenced the direction of African education, particularly technical, for many years to come. H. S. Keigwin, who became Director of Native Development in 1918 stressed industrial education which he envisaged was essential for the development of village industries. He advocated basket making, chair making, pottery, tile-work, and other basic crafts which would not compete with European skills and products.

The first government school to train Africans in village crafts was opened in 1920 at Domboshawa. Tjolutjo was established along similar lines the following year. These schools, Atkinson observes, "... were intended to foster ideals of community

development by providing training in rural crafts." However, pupils in both schools preferred academic education. Consequently, although still pursuing industrial education, "...Keigwin...found that he had to offer the same academic work as first-class mission schools" (Parker, 1960, p. 77).

From the beginning of colonial rule, successive education ordinances were instituted to direct African education along industrial lines. The first such ordinance came in 1899 and directed that missionaries were to emphasise industrial training in African schools and devote at least 50 per cent of school time to it. The 1903 Ordinance stipulated that industrial education was to be systematically taught and the 1907 Ordinance prescribed that industrial training had to include farming, brick making, road making, building, carpentry, ironwork, and for the girls, domestic work (Report of the Department of Native Education, 1921). This policy was reiterated by the United States-funded Phelps Stokes Commission in 1924 and the Hadfield Commission in 1927.

Missionaries and colonial administrators differed with regard to the type of education they considered appropriate for Africans. While evangelism was their chief aim, missionaries were not opposed to the policy of industrial education. They regarded it as a necessary component of their Christian moral instruction. Their schools provided industrial training either as a vocational course, an extra curricula activity or as part of the normal school curriculum. They were however more committed to the promotion of formal academic education. They believed such education would enable the indigenous people to understand the scripture and participate in various evangelical and other church activities.

Colonial administrators on the other hand, preferred that industrial education be emphasised for Africans. They wanted them to acquire skills that rendered them more useful for the economic interests of white settlers. The colonial government was more interested in providing skills which could be used to improve industrial and agricultural productivity. Socioeconomic interests of the Africans were almost totally ignored.

Africans realised that the colonial government wanted them to get an education that was inferior to that of Europeans. They noticed that Europeans emphasised academic education in their own schools and therefore wanted the same for their children. This they believed would improve their socioeconomic situation. The Director of Education wrote in 1913 that, "The African takes more kindly to literary than industrial training," and complained, "...the advantages of combining industrial and literary training are not sufficiently appreciated by many superintendents of mission schools" (Parker 1960, p.74). Africans wanted an education that narrowed the apparent social gap that existed between them and Europeans and that enabled them to enjoy a standard of living that differed from their traditional way of life. They perceived academic and not industrial education as a means to this end. Industrial education was therefore resented and viewed with the suspicion that it was intended to assign an inferior status to the African (Dorsey, 1975 and Atkinson, 1972). This notion was reinforced by the fact that the most 'lucrative' occupations in mission stations, the formal economic sector and government bureaucracy were 'white-collar' and required academic rather than industrial qualifications.

The 1925 Commission of Inquiry into Native Education reiterated the need to emphasise

agricultural and industrial education for Africans. It also recommended that a separate department for African education be formed, and this was done in 1927. The first Director of Native Education, H. Jowitt, continued advocating 'a close relationship between the African school curriculum and everyday needs and opportunities of African life.' This implied emphasising basic industrial rather than academic education. European education on the other hand continued along academic lines with industrial training being provided to the least able pupils who nevertheless followed a mainly academic curriculum. Europeans supported these policies aimed at preventing the growth of an educated African class that was capable of making a bid for economic and political power. The dual educational system which evolved from these policies reflects the overall political and socioeconomic structure which prevailed throughout the colonial era. All administrative and other institutions maintained the racial divide between Africans and Europeans. Riddell (1980) observes that Rhodesia's educational institutions were the major tools used to establish and maintain social inequalities between the black majority and the white minority.

2.1.1 The development of secondary education for Africans

While the first secondary school for Europeans, St. Georges College in Bulawayo, was opened in 1896, the first secondary school for Africans was only established in 1939 at Penhalonga, by missionaries and remained unaided by government until 1945 when the first government grants were provided for African secondary schools. By 1945, there were two more mission secondary schools operating at Kutama and Dadaya. In 1950, two more were opened at Hartzell and Solusi mission centres, and a further two followed in 1951 at Tegwani and Gokomere.

The various mission groups operating in the country felt a need to provide secondary education for Africans. They wanted them to be suitably educated and trained to teach in the upper primary school grades and staff the mission hospitals and clinics which were being established throughout the country. The first government secondary school was only opened in 1946 at Goromonzi. It offered an academic curriculum and operated along the lines of English public schools of the time. By 1960, out of the 23 African secondary schools operating throughout the country, only 5 were government and by 1971 there were only 17 government secondary schools out of a total of 100 operating for Africans.

The establishment of the first secondary schools for Africans coincided with the outbreak of the Second World War, which affected government policy towards Africans in various ways. Zvobgo (1986, p. 18) observes that, "Huggins' government sought to have Africans ... as allies in the war. ... the first step towards appeasing blacks and securing their support and cooperation was to stop legislating against them." Secondary schools therefore started with less restrictions compared to primary schools opened before the war. Increasing pressure from the white community however forced Huggins to abandon the appeasement policies. He reintroduced strict control over African education, particularly the development of secondary schools. Missionaries were required to submit all plans for new schools, to government for approval (Zvobgo, 1986).

The curriculum in these African secondary schools was mainly academically oriented and pupils wrote the external examinations for the Cambridge School Certificate. Although a few of them, particularly mission schools, offered courses up to Junior

Certificate (JC) or 'O' level in commercial studies, accounts needlework, cookery, woodwork, metalwork, and technical drawing, the majority of the schools offered academic subjects only.

Garfield Todd, who succeeded Huggins as the Prime Minister of Rhodesia and Nyasaland after the formation of the Federation of Rhodesia and Nyasaland in 1953, was more positive towards African education. His Five Year Plan reflects the most pro-African education policy of the colonial period. The number of secondary schools increased from 11 to 19 during the period between 1954 and 1958. Again, white opposition grew leading to his replacement both as party leader and Prime Minister in 1957. His successor Edgar Whitehead, while cautious of the prevailing political developments, continued to make improvements in the provision of African education.

As Zvobgo (1986) points out, Todd and Whitehead's "liberalism" should be viewed against a background of growing African nationalism and trade unionism at the time. Nevertheless, both regimes responded positively to African demands, despite opposition from the white population. This was actually the only period when African education had some sympathy from colonial administrators. After Winston Field of the Rhodesia Front Party (RF) came to power, education policies for Africans became even more restrictive than previously experienced. The education policy of the Rhodesia Front Party was based on recommendations of the Judges Commission of 1962 and resembled Keigwin's philosophy which required African education to be vocationally oriented at junior secondary school level.

The Judges Commission had been set up in 1962, to investigate educational organisation in Southern Rhodesia. Among the major recommendations it made for African education were the following:

- (a) African pupils were to follow a seven-year primary course, (instead of the eight years they were doing then), followed by three years of junior secondary education to Junior Certificate level.
- (b) The junior secondary course, unlike other forms of secondary education, was to have a strong vocational bias, according to the employment needs of each particular locality.
- (c) Opportunities for academic secondary education were to be extended, so as to provide 'a quick and smooth ascent to the educational summit for a minority of able, eager and ambitious children' (Atkinson, 1972).

2.1.2 The 1966 Education Plan and the introduction of junior secondary (F2) schools

Colonial policies of racial segregation and discrimination were consolidated and compounded in 1965 after the infamous Unilateral Declaration of Independence (UDI) by the RF. The subsequent Ten Year Education Plan which was introduced in 1966 only imposed more restrictions on educational opportunities for black children. The Education Plan was mainly based on recommendations made in the Judges Report of 1962. The Plan left out a lot of the recommendations from the Report which were positive towards African education, but modified and adopted the following:

- (a) A full seven-year course of primary education for all, beginning in 1969.
- (b) A two year post-primary vocational preparation course in a new type of junior secondary school. Approximately 37,5 per cent of primary school leavers were accommodated in these new schools by 1974. Pupils would leave these schools at the

age of approximately 16 years. About one third of the time was to be devoted to handwork and other activities related to the area in which the school was situated.

(c) A four year course of formal, academic secondary education for 12,5 per cent of primary school leavers, followed by a further two-year course for those suitable for sixth form work and university entrance.

(d) Provision of correspondence courses for the 50 per cent primary school leavers who would not be accommodated in secondary schools. The cost of the courses was however to be met by the pupils. (Ministry of African Education, Rhodesia, 1966)

Announcing these recommendations, the Minister of African Education, A. P. Smith, gave one of the main reasons for the change in policy as "...the justified criticism of the African parents that the present system lacks purpose" (p.4). He added that 'purpose' in education could be achieved by the establishment of a relationship between the school and the area in which it was situated. Accordingly, F2 education could be described as an 'ecological secondary education course', in which African children would be provided with an education related to their immediate, mainly rural environment.

In addition to their 'community' or 'ecological' relevance, the junior secondary schools were to provide semi-skilled manpower required to meet the demands of industry in urban areas, and of agricultural operations in rural areas. The Plan further proposed the establishment of a youth placement organisation to assist in coordinating the skill requirements of industry and placing of school-leavers in employment.

The Junior Certificate examination or some other selection mechanism at the end of the two-year junior secondary school course was to be retained. This was to enable those pupils who had been 'mis-sorted' to re-enter the formal secondary stream at the

academic senior schools. For the majority of the primary school leavers however, the two-year junior secondary school course would be terminal.

The first and second years of junior secondary (F2) school were named Grades 8 and 9, respectively, while the senior secondary (F1) schools continued using the existing nomenclature of Form 1, Form 2, etc. Grades 8 and 9 were to be taught by teachers who had trained for two years post-Cambridge 'O' level. In addition, specialist teachers for handwork and other manual activities would be employed to give basic training in industrial, agricultural, and domestic science occupations. Senior secondary (F1) schools on the other hand, were to be staffed with three-year trained, post first-class Cambridge School Certificate teachers for Forms 1 and 2, and possibly 3, while university graduates would teach higher forms.

Capital costs of building the junior secondary schools were to be borne by local government authorities and communities or voluntary agencies. The government was to provide a grant to build laboratories and workshops only. Overall government spending on African education was reduced from 8.6 per cent of the gross national product (GNP) in 1965 to 2 per cent in 1967 (Zvobgo, 1986). Local communities were required to provide most of the financial resources for schools in their areas. According to the 1966 Plan, 300 junior secondary schools were to be established in the first ten years, a target which was never realised. Junior secondary schools were redesignated F2 schools in 1972 and brought within a single category of secondary schools during 1976.

The junior secondary (F2) schools were received with contempt. Their introduction

sparked widespread criticism among the Africans who saw the schools as providing a 'second-class' type of education. The value of pre-vocational courses and the career opportunities for pupils from these schools were considered to be minimal (Mlambo, 1972, p. 5). The F2 schools did not lead on to any academic course. Atkinson (in Postlethwaite, 1988, p. 743) argues that these criticisms were:

...less on grounds of principle than because suitable employment opportunities, lack of places in academic secondary schools for qualified African youngsters, and the fact that junior secondary-type education was not being provided for European pupils (virtually all of whom had the opportunity to undertake academic secondary schooling).

Replying to questions in parliament in 1970, the Minister of Education explained that only in certain trades would the two-year junior secondary course lead to the possibility of trade apprenticeship:

For the more skilled trades, however, the entrant would be better prepared at a senior secondary school, and in this respect, I should mention that we have recently introduced special grants for these senior secondary schools to encourage the study of practical subjects such as woodwork and metalwork. ... It is the children from the senior secondary schools who should have first priority in the technical training required to produce skilled tradesmen. (extract of the Senate Debates quoted in, O'Callaghan and Austin, 1977, p.61).

This reaffirmed the prevailing suspicion that F2 schools were inferior to the academically oriented F1 secondary schools, in terms of preparing school leavers for employment, further or higher education. The demands for academic education therefore continued to escalate.

2.1.3 The 1979 Education Act and the demise of the F2 system

The 1966 Education Plan continued to operate until the 'internal settlement' between the Rhodesian Front (RF) and the United African National Council (UANC). The coalition government of these parties professed to bring an end to racial segregation and discrimination in the country. Accordingly, a new education act was introduced in February 1979. It came as an educational reform to integrate the European and African divisions of education. However, the act was designed more to preserve than to change the existing pattern of education (Riddell 1980). Although the dual system of European and African education was scrapped, new measures were introduced to maintain the division and prevent black pupils from outnumbering whites in former 'European-only' schools. The introduction of the zoning system and the fact that local communities, through management committees, were granted more powers to control schools helped to preserve the racial divisions in education.

In August 1979, the Ministry of Education announced its new education policy. It proposed the integration of the F1 and F2 secondary schools into bilateral and eventually comprehensive schools. This implied that all schools would eventually be expected to offer both academic and vocational subjects. Nevertheless, schools could still maintain some purely academic streams. Initially, F2 schools were to be renamed Technical High Schools while F1 schools were to be called High Schools. The change of name was intended to boost the image of the junior secondary schools, but was in essence merely cosmetic. Although they were now offering four-year courses leading to Grade 11 examinations, there were no significant changes in the curriculum and the original objectives. The F2 schools continued to be unpopular. It was therefore decided to

replace them with the National Certificate of Education (NCE).

2.1.4 The National Certificate of Education (NCE)

The National Certificate of Education (NCE) was to be introduced at all secondary schools in the country, to replace the Rhodesia Junior Certificate (RJC), the Rhodesia Certificate of Education (RCE) and the Grade 9 examinations. This was intended to give the opportunity for all successful pupils to proceed to the academically oriented 'O' level curriculum. The NCE generally offered a three year secondary school course which would be terminal for the majority of pupils, but the brighter ones had the chance of progressing to 'O' level for a further two years. Commenting on the NCE in the Secretary's Annual Report for the year ending 31 December 1979, A. J. Smith claimed that:

The NCE curriculum will allow heads of bilateral and technical secondary schools greater flexibility and freedom of choice than they previously enjoyed: ...regarding such matters as the choice of curriculum and the streaming of pupils in the light of available staff and facilities. Every effort has been made to publicise the new examination and meetings have been held ... with employers who have expressed their satisfaction with one examination replacing the various examinations previously in existence in the two Divisions. (p. 4)

The NCE incorporated some of the recommendations made by the Judges Commission of 1962. It resembled the model which operated in European Schools. White children had compulsory education up to 'O' level and therefore had no examinations at the end of their primary schooling. On admission to secondary school however, they were streamed by means of entry tests, according to their potential, aptitude and interest, to determine the course of study most suited to them. The NCE was intended to provide a vocational orientation to the bottom 50 per cent of their primary school leavers. This

group was further subdivided into two halves for those who undertook NCE in 4 years and those who did it in 3 years. The top 50 per cent of white primary school leavers followed an academically oriented Associated Examinations Board (AEB) course. This group was expected to proceed to higher education.

Although the NCE was vocationally oriented, it offered both practical and academic subjects to enable pupils to prepare for employment, vocational training or even higher education. Policy-makers thought the NCE would be more acceptable because, although it was vocationally oriented, it left open the opportunity for pupils to pursue their education along academic lines. The NCE was therefore regarded as a suitable substitute to the F2 system which schools were asked to abandon with immediate effect.

The introduction of the NCE was also based on the assumption that improving African education meant offering black children the same curriculum that operated in European schools. Policy-makers thought that since the NCE resembled the system which operated in white schools, it would be readily accepted as an improvement to African education. The decision to adopt the NCE also reflects the persistence of policy-makers to continue offering technical education within schools.

The change to NCE was so abrupt and haphazard that no consideration was taken regarding pupils who were following the F2 system. For instance, pupils who were in Grade 10 when this new policy came into effect, were suddenly faced with a further three or four year NCE course, instead of their one final year. Some pupils were so disillusioned by the F2 education, and did not like the NCE either, to the extent that

they went back to start from one and followed the four-year F1 academic course, even though they were already in Grade 11. It soon became clear that, like the F2 course, the NCE was also not accepted since it was meant for the less able pupils only. African pupils and their parents did not want an education that restricted their chances of academic advancement. Also, the notion that all they wanted was an education that was similar to that offered to Europeans was erroneous. The Cambridge 'O' level certificate remained popular instead of the AEB which white children followed.

2.1.5 Summary of colonial education developments

The preceding sections have traced the development of formal education in Zimbabwe during the colonial period. Missionaries played a leading role in the provision of educational facilities for Africans. Their progress was particularly pronounced after the establishment of colonial control in the country. Although the colonial rule made it easier for missionaries to open up more mission stations and build more schools, the government imposed severe restrictions intended to thwart the advancement of African education.

Three major groups exerted different pressures to shape and direct African education during the colonial period. First were the missionaries who introduced and continued to play a leading role in the education of Africans. Although their main objective was to spread Christianity, missionaries regarded the education of Africans as a high priority. It is largely because of their commitment to the provision of school facilities, that government felt it prudent to step in and control the development of African education.

Second, were the Africans whose demands for education soon exceeded the expectations and capacity of both the missionaries and the government, to provide it. These demands were for both the quantity and quality of educational facilities and provision. In the struggle for liberation from colonial rule, education remained at the centre of the conflict between the African population and the colonial government. Actually, during the period following the first wars to resist the imposition of white rule in Zimbabwe in the 1890s, up till the end of World War II, African struggle for emancipation was directed through demands for education. It was only later, that Kwame Nkrumah's adage that 'seek ye first the political kingdom and all other things shall be added unto you' became the guiding principle, leading to the armed liberation struggle.

The colonial government formed the third group of influence on African education although theirs was a mainly negative role. They were bent on ensuring that Africans would not be 'overeducated'. They used the grant-in-aid system and legislation to restrict African education. They feared that education would raise the political consciousness of black people and this would threaten the continued dominance of the white minority population.

Colonial administrators used two major strategies to restrict African education. First, they controlled the number and quality of educational facilities in order to ensure that very few Africans would get educated, and that their education would be inferior to that of Europeans. The second strategy was to emphasise basic industrial and craft subjects which did not lead to higher education or skilled employment.

Box 2.1: Synopsis of colonial vocational education policies

- 1899: Promulgation of the first Education Ordinance, which was amended in 1901 requiring missionaries to devote at least 50 per cent of school time for Africans, to industrial education.
- 1903: The second Education Ordinance stipulating that industrial education was to be systematically taught.
- 1907: An Education Ordinance prescribing that industrial training was to include farming, brick making, road making, building, carpentry, ironwork, and, for girls, domestic work.
- 1911: The Graham Commission recommends that African education should stress religious, industrial and moral education.
- 1920: The Keigwin Commission recommends that a small number of mission schools for Africans be developed to provide better training than was being done at the time, and that industrial and practical training form the backbone of African Education.
Domboshawa training school for Africans is founded along the lines of the recommendations of the Keigwin Report.
- 1921: Tjolotjo training school for Africans is founded along the lines of Domboshawa.
- 1925: The Morris Carter Land Commission recommends that the country be divided into exclusively separate areas for Europeans and Africans and that education be designed to help them for their roles in the respective societies.
- 1936: The Fox Commission recommends that education should prepare different people to live and contribute to the development of their own communities.
- 1952: The Kerr Commission reiterates the notion that African education should foster ideals of community development by providing training in rural crafts.
- 1957: The Bray Commission recommends that technical education be considered essential for Africans to ensure economic development of the country.
- 1962: The Judges Commission recommends the establishment of junior secondary schools, which were to emphasise technical and practical subjects, for the majority of African children.
- 1966: An education plan is announced, adopting the recommendations of the Judges Commission concerning the establishment of junior secondary (F2) schools.
- 1979: A new Education Plan is introduced to replace the 1966 Plan. F2 schools are renamed Technical High Schools while the Grades 9 and 11 examinations are replaced with the NCE.

2.1.6 Legacies of colonial education policies

Despite continuous attempts by colonial administrators to emphasise practical work, the curriculum in African schools remained largely academic. It catered almost exclusively for the needs of a minute proportion of pupils who continued into higher education. Riddell (1980) remarks that the education system in Rhodesia "... was elitist, highly selective, economically wasteful, and geared to the needs of the small modern sector economy which was incapable of providing enough jobs for the growing population" Consequently, while there were skill shortages in the country, most of the black school-leavers, even those with secondary school education, remained unemployed. The white minority population and white immigrants provided most of the skilled labour and were mostly trained outside the country. This encouraged the authorities to discriminate against and shun any efforts to develop a sound indigenous skill base (Zimbabwe Annual Review of Manpower, 1983).

Rhodesia developed a distinct 'dual' socioeconomic character. Its small but technologically sophisticated urban sphere existed in contrast to the vast underdeveloped rural subsistence sector. The rural peasant society increasingly depended on the urban wage economy for survival. Education was therefore increasingly regarded as a means out of a peasant existence in the rural areas, where chances of finding profitable employment were next to nothing (Riddell, 1980). The employment situation had further deteriorated by the closing years of the colonial era, with an escalating war, an economy hit by sanctions and a crippling oil crisis. Murphree, et al (1975) observe that for those pupils who battled through the academic secondary school over 80 per cent of them remained unemployed and 45 per cent of those who got jobs were underemployed.

Paradoxically, academic education became essentially 'vocational' since it led to better employment opportunities. The formal employment sector preferred to recruit people with academic rather than industrial or vocational education. This situation led to what is still largely believed to be a negative attitude of parents and pupils towards vocational education and blue collar occupations. Their attitude was mainly influenced by the employment opportunities that existed for people who had followed different lines of education. The increasing disparities in earnings between urban and rural areas and also between white- and blue-collar occupations made people prefer academic rather than vocational education.

The education system in Zimbabwe today, is a product of two distinct sociopolitical ideologies. Prior to independence in 1980, the colonial government operated two parallel systems of education which were based on racial segregation. There were two divisions of education: one for Europeans, Coloureds and Asians; and the other for Africans. Education during this period, was characterised by disparities in the provision of facilities and opportunities in African and European schools. The net result of the colonial policies was the existence of a very high standard of education for a small proportion of the population who could afford the relatively high school fees, and either no education or a high drop-out rate for the rest (Riddell 1980). Most of the black children either never started school at all or did not complete primary education.

Post-independence education policies proclaimed social justice and egalitarian objectives. They sought to establish through education, a socioeconomic system that did not discriminate pupils on the basis of their race, gender or socioeconomic background.

Paradoxically, the new government thought it prudent to maintain the inherited capitalist economic system since it was well developed, in spite of the inherent discrepancies. This meant that colonial legacies continued to prevail and disparities persisted in educational provision between rural and urban areas or based on socioeconomic background. The inherited capitalist economic system remained largely unchanged and unemployment of school-leavers only improved in the public sector. Vocationalisation of secondary education emerged as one of the key educational reforms intended to develop^a skilled workforce and boost economic development and solve school-leaver unemployment.

2.2 Post-independence policies and developments in secondary education

When Zimbabwe attained political independence in 1980, the Ministry of Education was restructured in accordance with the new political and socioeconomic order. The government of the newly-independent Zimbabwe embarked on a wide range of reforms in all sectors. The first black government formed by the Zimbabwe African National Union - Patriotic Front (ZANU-PF) adopted the transitional government's Education Act of 1979. Most of the post-independence educational reforms were however based on the ZANU-PF Party Manifesto. Among the key goals of the Manifesto, was the eradication of extreme disparities that existed between African and European education. Education was regarded as a basic human right and a key to economic growth and development along socialist lines.

The new education policies had to respond to the expectations of the 95 per cent majority black population in Zimbabwe. The independent government immediately

embarked on a massive expansion of educational facilities. Enrolments at both primary and secondary levels increased phenomenally. Since the main objective was to redress imbalances created by the colonial governments, most of this expansion went into the opening of new secondary schools in rural areas. The target was to provide a secondary school within walking distance of all rural pupils, wherever the geographical and demographic factors permitted.

The expansion of educational facilities at a scale unprecedented anywhere in the world, was well beyond the financial means of the new government. The decision to undertake the building programme was more of a political response to the electorate. Local authorities and parents were however asked to provide most of the necessary financial and other resources for building the schools. Over 90 per cent of the secondary schools were administered by local or other responsible authorities. The government assisted by providing building plans and a building grant-in-aid to help in the purchase of roofing materials and furniture. Government also paid a per capita grant for each pupil, to help towards the recurrent costs and paid teachers' salaries.

Local communities faced up to the challenge and showed total commitment in providing the educational facilities. This demonstrated how strong the desire for education was among Africans. Not only had their demands for schools been frustrated throughout the colonial period, but a large proportion of the few schools that had been built, were destroyed and closed due to the escalating war for independence. Many rural schools were destroyed to such an extent that their reconstruction was just as involving as building new ones. The participation of parents in the massive building programme was

motivated by their belief that education would bring about better employment and socioeconomic opportunities for their children.

The newly elected government wanted to meet the expectations of the majority African population who regarded education as a means into the formal employment sector and of improving their socioeconomic situations. The disparities that existed throughout the colonial era, were largely attributed to the fact that most of the Africans were denied education. The independent government considered education as one of the key ways to redress colonial injustices and establish a democratic and egalitarian society. The new education policies were based on the following goals:

- (a) The expansion of educational facilities and school places;
- (b) The abolition of racial segregation;
- (c) A new emphasis on scientific and technical education, particularly at secondary school level.
- (d) Localisation of the 'O' and 'A' level examinations and revision of syllabi, to make them more relevant to local conditions and requirements.

Quantitatively, the expansion of educational facilities was a major success. Secondary school enrolment increased from 66 215 in 1979 to 74 321 in 1980, 148 690 in 1981 and 695 882 in 1989, reaching a peak of 710 619 in 1991. In 1992, the figure dropped to 657 344 (Ministry of Education and Culture, 1993 statistics). The transition rate from primary to secondary school, at over 70 per cent, is among the highest in developing countries. However, new problems have emerged as a result of this expansion.

The country is now faced with an increasing number of pupils who take their 'O' level

examinations but leave school with no immediate employment prospects. The economy, currently afflicted with the adverse effects of the World Bank-prescribed Economic Structural Adjustment Programme (ESAP), is failing to cope with these demands. The industrial and commercial sectors have continued to exclude the majority black population from participating. They continue to be dominated by the multinational companies and have not kept pace with post-independence expectations of both government and the majority of the population. Future employment prospects generally and for school leavers in particular, remain bleak.

2.2.1 Developments in technical and vocational education

In its attempts to curb school leaver unemployment, the government decided to vocationalise secondary education. This policy appears to be largely based on the widely held assumption that, pupils fail to get jobs because they lack the necessary employment skills. Vocational education is therefore seen as a means to equip school-leavers with skills that enable them to secure jobs in the formal and informal sectors of the economy. Vocationalising education is also seen as a way of preparing the manpower required, particularly in skilled areas, to boost industrial development. Government attempts to move from a mainly academic curriculum towards a more vocational one, began with the introduction of the 'Education With Production' (EWP) programme soon after independence. The education system had remained largely academic, despite sustained attempts to emphasise an industrial bias throughout the colonial period.

2.2.2 Education With Production (EWP)

EWP was one of the first post-independence policies introduced to transform the education system in line with the new socioeconomic and political order. It followed government's avowed political ideology based on Marxist-Leninist principles of scientific socialism. It was perceived along the lines of what Karl Marx termed 'polytechnic education'. This seeks to link mental with manual work, aimed at producing 'totally developed individuals' who understand the world they live in (Chung and Ngara, 1985). EWP was intended to create a society of self-reliant people who appreciated and respected both manual and mental activities.

A semi-autonomous body referred to as the Zimbabwe Foundation For Education With Production (ZIMFEP) was instituted to pilot and administer EWP as a new philosophy which was to guide the whole education system (Gustafsson, 1987). ZIMFEP was authorised to experiment with school syllabi and come up with curricula that linked education with production projects in schools. EWP invoked the application of theoretical school learning to real-life situations. According to Chung and Ngara (1985), EWP related the secondary school curriculum to local needs and industrial processes. Through the integration of theory and practice all subjects were to bear a practical application to solve real-life problems faced by Zimbabweans (Ministry of Education, 1984).

Eight secondary schools were instituted to pilot the EWP scheme. The schools were all located on former European commercial farms. Initially, they only enrolled ex-refugee pupils from war camps in Mozambique and Zambia. These pupils and their teachers had

practised EWP in refugee schools while they were still in exile. The pilot schools were expected to play a leading role in introducing EWP and form the nucleus of a new type of secondary education in the country.

Initially ZIMFEP seemed to succeed, although this was only limited to the pilot schools. Ex-refugee pupils who occupied these schools were mostly accommodated in tents and make-shift shelters. They immediately started erecting their own school buildings and engaged in various productive activities, as part of their practical training. Agricultural lessons involved pupils in actual farm production of food and livestock, along commercial lines.

However, an evaluation carried out by the Ministry of Education in 1986 revealed that on the whole ZIMFEP had not been successful in implementing EWP, even at the pilot schools. Instead of transforming the existing conventional secondary schools, the ZIMFEP pilot schools themselves were 'conventionalised'. The evaluation also found that career aspirations of pupils in the pilot schools did not match the aims and objectives of ZIMFEP. Also, pupils could not relate the theoretical and practical aspects of EWP. They generally indicated a dislike for practical subjects, even though they seemed to approve of the concept of EWP as part of school learning.

The majority of teachers who were transferred to the ZIMFEP pilot schools did not seem to understand the philosophy of EWP. Even most of the Education Officers (EOs) were not conversant with EWP and could not therefore guide schools. There was ambiguity regarding how much autonomy ZIMFEP schools had since their day to day

administration still came under the Ministry of Education. As government schools, they were expected to conform to specific curricula requirements, leaving little scope for experimentation. Also, the Ministry appointed and transferred teachers without paying due regard to the specific requirements of the pilot schools. As a result, the schools ended up with teachers who neither understood nor appreciated EWP.

Although these schools were given the autonomy to experiment with curricula, they were still required to follow the Cambridge 'O' Level syllabi. A substantial amount of time was to be devoted to EWP 'production' work, yet this did not lead to any certification. The 'O' level examinations therefore continued to influence curricula. Schools found it prudent to pay more attention to the requirements of public examinations in order to meet the expectations of both parents and pupils. ZIMFEP (1984) conceded that school curricula had remained 'examination oriented' and the success of a school was still determined by the number of pupils who passed the 'O' level examinations.

EWP particularly faltered as the original ex-refugee pupils completed and were replaced by those who came to these schools not for EWP, but in pursuit of their academic 'O' levels. Although EWP was not formally terminated and its pilot status never concluded, a new vocationalisation pilot scheme was launched to replace it through the 1986 Education Plan discussed in more detail in chapter 6. The Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) which were introduced successively as pilot schemes to vocationalise secondary education in Zimbabwe are the subject of the current analysis. However, it is necessary to examine

the provision of school-based vocational education from an international perspective before examining these schemes more closely.

2.3 Conclusions

This chapter traced the development of formal education in Zimbabwe since the early missionary and colonial years. It focused on secondary education and showed how curricula in African schools remained largely academic in spite of persistent policies emphasising technical and vocational education throughout the colonial period. Although human resource development appeared to be the main motivating factor behind the vocationalisation policies, the colonialists did not want Africans to be highly skilled. They feared this would undermine the power, control and monopoly of the minority white population over the economy. Vocational education for Africans was limited to low-level craft and technical skills that would make them useful under white employers and supervision. Colonial vocationalisation policies were therefore characterised by the contradiction of proclaiming to provide pupils with work-related skills while attempting to limit the levels of proficiency attained. Its main objectives can be summarised as follows:

- to prepare pupils for semi-skilled roles in the productive sector;
- to divert pupils' attention from university-oriented academic education and therefore minimise the demand for further and higher education;
- to curb the drift from rural to urban areas and limit the demand for jobs in the formal sectors of the economy;
- to ensure that Africans would not become 'over-educated' and 'over-skilled' and pose a challenge to the Whites on the labour market.

The chapter provides the background against which current attempts to vocationalise school-curricula in post-colonial countries should be viewed. The fact that colonial vocational education was intended to limit the educational and economic progress of pupils has implications on post-independence educational reforms. It becomes necessary not only to provide vocational education but to change its focus. However, the continued dominance of the formal sector of the economy and the tendency of post-colonial countries to base vocational educational policies on the requirements of industry perpetuates the disparities of colonial education.

The change in focus of post-independence school-based vocational education is apparent in the EWP and the ZIMFEP pilot scheme. However, its provision as part of the post-independence political, ideological, social and economic reorientation seemed to meet with limited success. The next chapter surveys literature on the controversy that has developed regarding the provision of school-based vocational education internationally.

Chapter 3: Vocationalisation of secondary education - a review of literature

3.1 Introduction

The purpose of this chapter is to identify the major issues and perspectives emerging from international literature concerning attempts to vocationalise secondary education in developing countries, particularly focusing on post-colonial states. Although the study investigates vocationalisation in relation to Zimbabwe, it is inspired by issues emerging from international literature and empirical evidence from other countries. It is therefore necessary to identify these issues from an international perspective before focusing specifically on Zimbabwe. The study concentrates on attempts to vocationalise secondary education and does not include a parallel debate concerning post-school vocational education programmes.

3.2 Conceptions of vocational education

3.2.1 The academic / vocational dichotomy

The provision of vocational education in school curricula has been a contentious issue since the introduction of formal systems of education. The problem can be traced from ancient Greece where early philosophers regarded vocations as lower in status than academic pursuits. Their conceptions of 'valid knowledge' separated 'mental' from 'manual' activities. Although this dichotomy has been contested by various scholars over the generations, it is still widely supported and continues to influence educational provision up to this day. Hager (1990) observes that 'vocational' and 'general' education

have come to be seen as distinctly different. Foster (1987) illustrates the persistent controversy with the adage:

'Old soldiers never die'... we can regard the whole controversy over technical / vocational versus general education... as one of the truly old soldiers among development issues which is not even fading away. (p. 137)

In developed capitalist countries industrial education was introduced as a 'lower' form of education for working class children. The notion that vocational education was of lower status than academic was passed on to countries which were colonised by western industrialised countries. This is particularly true in Africa where manual work had traditionally been highly regarded as a means of survival. This section examines how the early and contemporary conceptions of vocational education have contributed to the controversy surrounding vocationalisation of secondary education. It is contended in the current study that most of the arguments are due to the perpetuation of the notions of knowledge in which vocational subjects were perceived to involve manual skills only and not the intellect.

Attempts to draw or obliterate the line between vocational and liberal education have been debated extensively in relation to the question, '*what constitutes a valid school curriculum?*' Liberal or general education is widely regarded as the norm for school curricula and is seen as the means to impart a broad knowledge base. It is believed to stimulate cognitive development of pupils and is regarded as the 'hallmark' of an 'educated' person. Vocational education on the other hand, "... is viewed as being narrow, of merely instrumental value, and thus constituting the very antithesis of liberal

education." (Lewis, 1991, p. 95)

These conceptions seem to be derived from the traditionally perceived purposes of formal education. Historically in Western capitalist societies, liberal education was regarded as 'the education' for the upper class and did not have direct occupational goals. It was intended to socialise children of the genteel into their respective social roles in the 'class society' (Anderson, 1965). Vocational education was provided as an indenture of working class children into specific industrial jobs. Bowman (1988) observes that the first 'industrial schools' introduced in Elizabethian England provided technical education for working class children and "... were based on an exploitative semi-skilled apprenticeship that had more in common with the workhouse than with education." (p. 153) However working class parents preferred an academic education that seemed to hold better prospects for their children. In spite of the increasing criticism of the dual provision and apparent tendency of schools to reinforce social class differences, these views continue to influence the provision of education.

The provision of vocational education based on social class stratification proliferated to colonised countries, though class differences in the colonies were based on racial identity. As discussed in chapter 2, the first secondary schools in Zimbabwe were modelled along the English public schools of the time. They catered for an 'elite' university-bound group. Vocational education was introduced at secondary school level for Africans mainly to prepare them for semi-skilled occupations. These colonial legacies continue to influence what is regarded as 'valid' schooling by parents, teachers and policy makers (Lewis, 1991). Most educationists who went through the elitist

colonial education system tend to view vocational education with contempt. They regard it as, "... the education of last resort, a fate reserved for the academically unfit, those who are unable to win the scarce [academic] school places" (Lewis, 1991, p. 96) The negative views held by parents and pupils regarding vocational education are reinforced by the structure of the economic system and labour market opportunities which continue to favour academic rather than vocational qualifications. It is necessary to point out that attitudes towards vocational education are only negative when opportunities from such education are not apparent and the reward structures in the economic system tend to favour academic rather than vocational graduates.

There is a general tendency to regard vocational education as being mainly concerned with manual work, while academic education involves intellectual work. Even some protagonists of vocational education tend to take this view and justify vocational education by emphasising its contribution in instilling the 'love of labour' and not its contribution in imparting cognitive skills thorough the practical application of theoretical knowledge. The impression depicted of vocational education is that it is only about 'doing' or using hands while liberal or academic education involves 'thinking'. 'Manipulative' or practical and 'cognitive' or theoretical skills are seen as different types of education which can be pursued independently of each other. The academic / vocational dichotomy is also based on the traditional division of labour in formal sectors of the economy in which practical occupations are believed to be devoid of any thinking. The perception of vocational education as mainly involving manual work and its primary function as that of providing skills required by industry developed when:

industrialists and scholars of the social efficiency school alike saw possibilities of harnessing schools for the purpose of providing industry with its human capital needs. (Lewis, 1991, p. 99)

3.2.2 Arguments surrounding the dichotomy

The view of vocational and academic education as dichotomous has been challenged by several scholars. Hager (1990, p. 18) cites Whitehead's (1950) assertion that:

... the antithesis between a technical and a liberal education is fallacious. There ...is, no education which does not impart both technique and intellectual vision. ...every form of education should give the pupil a technique, a science, and an assortment of general ideas and aesthetic application. (p. 74)

Scholars like John Dewey suggested broader conceptions of vocational education. Dewey (1920) criticised the provision of vocational education for purposes limited to the immediate requirements of industry pointing out that:

... there is a danger that vocational education would be interpreted in theory and practice as trade education: as a means of securing technical efficiency in specialised future pursuits. Education would then become an instrument of perpetuating unchanged the existing industrial order of society; instead of operating as a means of transformation. (p. 372)

He advocated a broad curriculum which acknowledged, "... the full intellectual and social meaning of a vocation" (Lewis, 1991, p. 100). Dewey disagreed with the establishment of separate vocational schools arguing that such vocationalism would apply only to pupils who did not have the economic means to pursue studies leading to university (Lewis, 1991). Dewey acceded to the inclusion of occupation-related studies in school curricula, but only in so far as their objectives went beyond the immediate requirements of industry. School activities had to blend both practical as well as

'intellectual' work.

These suggestions entail a rethinking of the whole concept of vocational education, including the fundamental philosophical and political considerations of vocationalism. Dewey's emphasis on the intellectual aspects of vocational education to supplement manual activities in providing a broader experience for pupils is contrary to the way in which vocational education was originally perceived in Western capitalist economies. His proposals sought to empower pupils and took cognisance of them as social beings with economic needs, rather than regarding the interests of industry as the sole purpose of educational provision. Lewis (1991, p. 105) rebukes the notion of designing curricula merely to satisfy the fancies of industrialists. He is however quick to point out that there is nothing wrong with education enabling pupils to get into employment upon leaving school. His views are echoed by Tozer and Nelson (1989) in Lewis (1991, p. 102), who uphold Dewey's concept of vocationalism, "... given the nature of today's labour market, what with the risk of training students for jobs which may not exist in the near future."

Critics of Dewey's broader concept of vocational education question whether education that is not oriented to the direct needs of employment is indeed 'vocational' at all. Silberman (1989) hints:

In our efforts to improve the ability of vocational education to reinforce academic skills, we must be careful not to take the heart out of vocational programs by removing their work-related components (in Lewis, 1991, p. 102).

There appears to be a belief that vocational education can only be either of the two

polarities of a continuum, whereby on one end it is almost entirely theoretical while on the other it is specific job training. However, there are variants in between and what Dewey advocated was neither of the two extremes.

Proponents of the economic view of vocational education stress its labour market outcomes. They ascribe any mismatch, to problems with vocational education without taking into account the dysfunctions in the labour market. Marxist writers have argued that vocational education is an instrument of inequality which consolidates the hierarchical social class structure of capitalist economies. Sociologists concerned with curricula-tracking in schools criticise the role of vocational education in reproducing capitalist social class relations. These arguments will be developed further in Chapter 4 which discusses how vocational education has come to be regarded as an instrument of social inequality. That chapter also discusses Collins' (1979) Conflict Theory to explain the competing interests of different power groups in society and how this influences educational provision. As evident from the debate that is outlined in the next section, several themes have emerged from the controversy surrounding the provision of school-based vocational education.

3.3 The 'vocationalisation debate'

What is referred to here as the 'vocationalisation debate' is the controversy that has developed internationally since the 1960s, concerning the provision of vocational education at secondary school level. Extensive literature has appeared under themes such as 'education and employment', 'diversification', or 'vocationalisation' of school curricula. This section begins with a general survey of literature then explores evidence

emanating from developing countries since the 1961 Conference of African Ministers of Education in Addis Ababa. The purpose of the section is to examine the arguments emanating from the controversy leading to the research questions investigated in the current study. It is contended that the vocationalisation debate has reached a stalemate in which policy makers and politicians in post-colonial states on the one hand and researchers on the other, seem to perceive the goals of vocational education from different perspectives. Pupils and parents are often assumed to have a negative attitude towards vocational education. Although the volume of literature denouncing school-based vocational education seems compelling, the bulk of it is based on economic considerations and the evidence is not conclusive.

3.3.1 Literature Survey

Psacharopoulos (1978) and Little (1986) provide succinct analyses of major shifts in research on 'education and employment' covering the decades 1960s to 1970s and 1970s to 1980s respectively. The perspectives of the 1980s are captured in Lillis and Hogan (1983), Lauglo and Lillis (1988) and Lillis (1989) *inter alia*. Lillis and Hogan provide a survey of the vocationalisation discourse in relation to developing countries. An international perspective of the issues surrounding the provision of school-based vocational education is covered extensively in Lauglo and Lillis (eds.) (1988) in a collation of articles presented at the Institute of Education, University of London in 1986. The issues raised in the literature cited above encapsulate the vocationalisation debate that is pursued in the current study. Focusing on post-colonial developing countries, the present study explores the controversy regarding vocational education since the mid 1960s. Following the post-world war II boom of the late 1940s to early

1960s, economies of most countries in the world started to dwindle and the anticipated contribution of education to economic development remained obscure. In developed countries unemployment levels, particularly 'youth' and 'educated unemployment' began to rise significantly. Politicians, employers and parents blamed youth unemployment on the schools which they said were not equipping school-leavers with "relevant employment skills" (Blaug, 1974; Bates et al, 1984; Watts, 1983; Wilcox, 1984; and McCormick, 1988). As levels of unemployment continued to rise and economies of both developed and developing countries declined, the efficacy of vocationalisation came under keener scrutiny. Concluding from evidence from eight developing countries, Lillis (1989) observes that while vocationalisation of secondary education remains high on the agenda of agencies and governments in developing countries, the policies have not resulted in anticipated cognitive and labour market outcomes.

(a) Anti-vocationalisation arguments

Increasing evidence has come to the conclusion that vocationalising school curricula is not viable (Foster, 1965; Lillis and Hogan 1983; Urevbu, 1984; Psacharopoulos and Loxley, 1985; Lillis, 1989; and Lauglo and Lillis, 1988; Psacharopoulos, 1991). Since the mid-1970s both multilateral and bilateral aid agencies such as the World Bank started showing significant shifts of their sponsorship from vocational to non-formal education and other programmes (World Bank, 1991; Coombe, 1988; Middleton and Demsky, 1989).

Most of the evidence castigating the inclusion of vocationally oriented courses in school curricula seems to be based on economic arguments (Psacharopoulos and Loxley, 1985

Cumming, 1986; and Coombe, 1988). As Lillis (1989, p.95) observes, "...with the exception of an expanded discussion of 'cost' and 'external efficiency', ...the debate has not been considerably extended". It is argued that vocational subjects are much more expensive than academic ones (Cumming, 1988). Lauglo and Lillis (1988) conclude that practical subjects have high unit costs but point out that available data render subject cost calculations difficult. Psacharopoulos and Loxley (1985) found in Tanzania that costs were 14 percent higher in the 'biased' schools than in those emphasising academic subjects. Lauglo (1985, p.189) concluded from an evaluation of secondary technical schools in Kenya that industrial education was twice as expensive as other subjects. Hinchliffe (1983), Psacharopoulos (1987), Foster (1987) and World Bank (1991) *inter alia*, all come to the conclusion that vocational education is more expensive than academic.

Costs and cost-effectiveness became a major criterion for determining the validity of vocational education policies, influenced by the human capital theory. Evidence based on rate-of-return analyses carried out in different countries (e.g. Psacharopoulos and Loxley, 1985; and Cumming, 1988) suggests that the high costs of vocational subjects are not matched with the expected economic returns. According to educational economists, school-based vocational education is not cost effective.

Psacharopoulos and Loxley (1985) investigated whether diversified schools in Colombia and Tanzania met the intended goals of policy-makers. They compared the advantages accruing to pupils from diversified tracks with those who had more academic types of education. The comparison was made through an investigation of the following main

questions:

1. Did diversified schools recruit pupils equally from all social backgrounds?
2. Were there significant differences between pupils in diversified and those in non-diversified tracks, with regard to their cognitive and non-cognitive achievement?
3. If there were differences, how could these be accounted for?
4. How strongly did these differences affect post-school outcomes?
5. How cost-effective were the diversified schools?

Taking the viewpoint that vocationalisation objectives were predominantly economic, Psacharopoulos and Loxley (1985) concluded that school-based vocational education was not viable. They found that diversified schools were more costly than the conventional academic ones yet they did not yield added benefits to pupils. Diversification was found not to improve the link between school and the world of work. Its measurable monetary benefits were not greater than those of conventional education. No difference was found in the amount of time pupils from diversified and those from non-diversified schools spent looking for employment.

In Colombia, Psacharopoulos and Loxley (1985) found that graduating from a diversified or conventional curriculum did not necessarily increase the propensity to join the labour market. Instead, pupils who had followed vocational courses had significantly longer periods of unemployment and those in employment earned less than academic graduates. In Tanzania however, technical students were more likely to be employed. Psacharopoulos and Loxley (1985) found that 13 percent of the academic students were still looking for either work or training one year after graduation compared to 8 percent

of technical students. However, the percentages for agricultural and commercial students who were neither in employment nor training was the highest. Psacharopoulos (1987, p. 195) asserts that in both Colombia and Tanzania, the incorporation of pre-vocational studies into the secondary school did not decrease pupils' demand for more schooling. He cites findings from numerous other studies confirming the argument that vocational programmes do not lead to labour market propensities or lowering of pupils' post-school aspirations.

The studies in Colombia and Tanzania were sponsored by the World Bank and their findings seem to have influenced its policy decision to discontinue supporting vocational education projects. The Bank states in its policy paper (World Bank, 1991, p. 68) that, "Bank lending should strengthen the quality of, and access to, academic secondary education, rather than prevocational courses." This policy has serious implications for developing countries, particularly those which relied on financial support from the Bank previously for their vocational education programmes. While they remain attracted to vocational education, they have no financial resources to implement it and may be forced to discontinue even those projects which they started when funds were available, irrespective of whether or not they could have succeeded. Further evaluation of such projects becomes difficult since the lack of finances tends to mask all other factors influencing them.

In Nigeria, Urevbu (1984) concluded that it was not certain that vocational education promoted economic development any more than conventional schooling. It is also argued that there is no evidence to suggest that vocationalisation in itself can provide a solution

to the problems of unemployment and underemployment (Lillis and Hogan, 1983; Blaug, 1974; Oxenham, 1988; Carnoy, 1977; and Bacchus, 1988). Blaug (1974) proposes that what is needed to solve the 'employment problem' is a coherent development strategy.

Lillis (1989, p.89) observes that, "... despite the very poor track record of success, the problem of articulating schooling with work remained a priority developmental issue on the global agenda." The arguments have not convinced politicians, policy-makers and administrators to abandon vocationalism. Even among researchers, no consensus seems to exist regarding the question posed by Psacharopoulos (1986) in his article entitled, 'To Vocationalise or not to Vocationalise? That is the Curriculum Question'. Lillis, (1989, p.98) points out that, "...very little literature explores epistemological questions, ...there has been little experimentation with new research methodologies...". The long-term benefits of vocational education to pupils and its effects on economic development have not been ascertained.

In his paper entitled 'Vocational Education Theory' Psacharopoulos (1991) provides a synopsis of what he perceives as the conclusions emerging from the vocational education discourse. His perspective is reminiscent of his earlier arguments, advanced in the Tanzanian and Colombian study. The 'social demand' and 'cost recovery' arguments which he advocates as the basis on which to determine educational provision are themselves problematic in developing country situations, requiring country-specific analyses. It is necessary to ascertain not just what preferences and views people hold about different types of education but to examine also what influences these choices. 'Social demand' in most developing countries is influenced largely by prevailing

economic labour market conditions. The suggestion therefore implies leaving educational provision to the whims and vagaries of 'market forces'. This raises the questions discussed at the beginning of the chapter about whether the purpose of education should be limited to the requirements of industry or is much broader. The implications of such a viewpoint are discussed in the next chapter when economic and sociological considerations are examined.

In most developing countries, the suggestion to follow 'social demand' contradicts the proposal to use the 'cost recovery' or 'price mechanism' to control the number of people wishing to go to university. Most parents and pupils aspire to university education which they see as enhancing their employment prospects. However, this is often misconstrued as a rejection of vocational education. Psacharopoulos (1991) concludes that the main reason why vocationalisation of secondary education failed to meet its intended goals was:

because students forced into the technical vocational stream would never choose, let alone accept, to enter a manual occupation. Education is being seen by all families, ...as a way into a modern job in the city. When the general education stream is closed for the sake of 'stopping the one-way street from the secondary to university... the inherent dynamics of behavioural choice by students and their parents is ignored. (p.194)

He postulates that because they are forced into the vocational stream, such students would seek ways of escaping from that stream and be admitted to university. Following the social demand argument, this would entail providing more facilities to make this possible yet the 'cost recovery' proposition has the opposite effect since most parents cannot afford it. Restricting education by means of 'affordability' tends to disadvantage

the majority of pupils coming from lower socioeconomic backgrounds. In any case, the demand for university education is not necessarily contradictory to the broader aims of vocational education. There is actually a need for more technologically oriented university degrees to meet the chronic shortages of such personnel in developing countries.

Concluding from occupational and educational structures in nine countries, Psacharopoulos (1991) concludes that there is no relationship between the degree of vocationalisation, (as determined by the vocational ratio) and per capita income. Defining the vocational ratio as the proportion of vocational to general education students in high school, Psacharopoulos (1991) illustrates his point by stating that, "... the United States seems to have managed well economically with a 2.6% vocational ratio, in comparison to Mexico's 12.7%" (p. 198). Psacharopoulos (1991) also concludes that there is no relationship between the intensity of vocationalisation and the share of the labour force in manual occupations. He observed in the nine countries he surveyed that manual labour had stabilised to about one third of the labour force while there was a sharp rise in white collar occupations, "... at the corresponding expense of agriculture" (p. 198).

Psacharopoulos seems to presuppose that the primary function of vocational education is the preparation of pupils for 'manual' occupations. The term 'manual occupations' is increasingly becoming blurred in view of the changing nature of technological occupations. They cannot be described as exclusively manual or mental, but a combination of both. The rise in white collar occupations does not necessarily imply that

jobs related to agricultural activities are diminishing. Most agricultural activities seem to depend on a small proportion of highly qualified white-collar personnel working as farm managers or in research and development or other administrative roles beside the majority of semi-literate manual workers who are normally in the lowest income brackets nationally and are usually employed seasonally in most developing countries. While the lucrative white-collar positions are limited, the available manual occupations are not an attractive option for pupils leaving school. The continuing advances in technology and farm mechanisation seems to result in less employment opportunities on commercial farms. For instance, the use of combined harvesters means that a large number of manual workers are no longer required on the farms.

There seems to be an assumption that vocational education prepares pupils for manual jobs while academic education prepares them for occupations that require cognitive ability. This is more to do with the negative perception of vocational education held by sceptics of vocational education. Proponents of vocational education see it as 'design education' in which both manual and cognitive skills are emphasised. They do not see it as the inculcation of low level skills to prepare pupils for manual occupations. Rather, they see its goal as that of providing technological literacy and practical skills to prepare pupils for the changing requirements of the world of work and to facilitate industrial and economic development.

The comparison of vocational ratios is insufficient to explain differences in economic development between countries, since so many other variables need to be taken into account. Also, simply comparing the number of pupils in vocational tracks and those in

academic is inadequate without first establishing what is regarded as 'vocational' or 'academic' in different countries. Outlining the difficulties in comparative research, Watson (1994) points out that the problem of terminology "...is particularly true with TVET/VOCED in different contexts and needs to be taken as a serious caution" (p.94). As he hints, it is necessary to ensure we are comparing like with like. The type and level of vocational education, as well as the way it is provided can bring about variations which need to be accounted for before drawing conclusions based on mere quantitative observations. Besides vocational educational provision, economic development is influenced by many other factors as discussed in the next chapter under the human capital theory.

Increasing literature has concluded that policies emphasising the provision of vocational education in schools are doomed to failure (Foster, 1965; Psacharopoulos and Loxley, 1985; Lauglo and Lillis, 1988; Urevbu, 1984; World Bank, 1991; Sifuna, 1992) They contend that schools should concentrate on increasing access and improving the quality of general academic education, particularly English, Mathematics and Science. However, the suggestion to delay providing vocational education until after secondary education implies denying the majority of pupils the opportunity to acquire even basic vocational skills. This point is elaborated further in chapter 4.

(b) Pro-vocationalisation arguments

Although the bulk of literature provides evidence counter to vocationalisation of school curricula, protagonists have provided counter-evidence in support of its provision. Although acknowledging that vocational subjects were substantially more expensive than

academic, Lauglo (1985) concludes from his study with Narman of practical subjects in Kenyan academic secondary schools that pupils with more exposure to industrial education were more positive towards the subjects and expected to find technically related jobs. He also justifies the inclusion of such subjects in school curricula on pedagogical grounds. Watson (1994) observes that Marx, Mao, Dewey, Plato, Nyerere, and Ghandi all advocated the incorporation of both practical and academic subjects as part of school learning. He identifies some of the claims which have been commonly stated in support of vocational education but which are also the source of the controversy surrounding school-based vocational education. These include the:

- (1) inculcation of relevant values and attitudes that prepare pupils for the formal sector of the economy;
- (2) provision of specific skills for employment in a variety of occupations;
- (3) alleviation of mass unemployment;
- (4) alleviation of obsolete work practices by reorienting existing work skills;
- (5) promotion of a work ethic and the importance of practical work and skills among pupils;
- (6) prevention of the migration of pupils from rural to urban areas;
- (7) preparation of pupils for self-employment;
- (8) preparation of citizens for technical and technological change; and
- (9) prevention of over-emphasis on academic education.

In Israel, Ziderman (1989) found vocational schooling to be more cost-effective than general academic education. He found that vocational school graduates who worked in occupations related to courses of study pursued at school earned more than their counterparts from general secondary schools. However, vocational graduates who were not employed in their areas of specialisation earned less. Vocational education was on

the average (though not necessarily in particular subjects, such as electronics), less expensive than academic. Ziderman (1989) found a cost-benefit advantage of terminal vocational over academic schooling and concluded that vocational schooling in Israel represented a sound investment in cost-benefit terms. He observes that pupils in vocational and those in academic schools:

... differ in background characteristics which, in turn, are correlated with earnings. Unless factors of social class and parental background are controlled for in comparing the earnings of general and vocational school completers, biased estimates of the differential earnings effect will result (p. 48).

Ziderman concludes that studies reporting equal post-schooling earnings for vocational and academic school leavers might be "... masking very real differences in labour market outcomes favouring vocational school completers." Cumming (1971) found technical subjects to be less expensive than classics although English was even cheaper. Cumming (1986, p. 6) cites the findings of Hu et al (1971) who, "... concluded that not only were the monetary returns of vocational graduates higher than those of comprehensive graduates, but also for one city, ...the returns greatly exceeded the costs", in three American cities. Cumming (1986) remarks that studies on cost structures of secondary schooling such as Hinchliffe's (1983) in Tanzania and Colombia or Lauglo and Narman's in Kenya, compared costs between schools with biases and not between separate subjects. On the Kenyan study, Cumming (1986) criticises its overall design and the short period of fieldwork which did not allow the full rigours of costing to be applied.

3.3.2 Vocationalisation of secondary education in Africa

During the 1960s when belief in human capital theory was prevalent priority was given to agricultural, vocational and technical education rather than the provision of academic education. Developing countries were urged to divert their schools at all levels, from basic general education to large scale technical and agricultural education.

The end of colonial rule gave further impetus to the need to vocationalise education in Africa. According to Urevbu (1988):

... just as the earlier colonial attempt to make education 'practical' and 'functional' was losing momentum in the mid-1950s, 'school-based' vocational and technical education got a new boost in the newly independent African countries. (p.259)

It was believed that school-based technical and vocational education would contribute to the economic development of African countries. It seems paradoxical that in most African countries vocationalisation was rejected during the colonial period, yet newly independent governments regarded it as a priority in their educational reforms. However, as discussed in Chapter 2, pre-independence vocational education was rejected because it was intended to provide an 'inferior' education for black people. Its primary function was to provide a pool of semi-skilled 'manual workers' to serve the needs of colonialists while at the same time ensuring that black children would not pose a threat to whites on the labour market. It was not intended to prepare Africans for lucrative occupations such as engineering, architecture or other highly skilled technical vocations. Newly-independent governments therefore attempted to scrap the negative colonial goals and objectives from their education policies. In terms of content and teaching methods

however, post-independence vocational education remains essentially unchanged. Also the economic and labour market structures continue to operate unfavourably against pupils who follow vocationally oriented curricula. It therefore continues to be seen by parents in its colonial context.

Policy-makers and educationists often fail to distinguish between different types of vocational education and the purposes they want it to serve. Consequently, vocational education programmes fail to meet the expectations of pupils, parents and the labour market. Also, parents' and pupils' expectations are rarely investigated and matched with the intended goals of vocational education programmes. Concern is usually about what skills employers expect school-leavers to possess. A scrutiny of parents' and pupils' expectations, labour market conditions, the type and content of vocational education that is 'relevant', the teaching and assessment methods used, and an inventory of the resources available is necessary in deciding a vocational education policy. The term 'relevant' presents further problems since it is rather subjective and tends to be regarded differently by educationist, industrialists, parents and pupils.

3.3.3 The 1961 Conference of African Ministers of Education and 'the vocationalisation debate'

The vocationalisation debate in Africa was given impetus by the 1961 Conference of African Ministers of Education in Addis Ababa (Foster, 1965). In its recommendations, the UNESCO-sponsored conference criticised schools for:

- (a) not training pupils for agriculture;
- (b) developing negative attitudes towards agriculture; and
- (c) promoting urban migration among school-leavers.

These views were influenced by the prevailing belief in 'human capital theory' (HCT). Prominent economists, the United Nations and other interested groups all advocated for a fully integrated system of agricultural education within the general framework of technical and vocational education (Middleton and Demsky, 1989).

The Conference played a significant role in the formulation of education policies in Africa. It was jointly organised by the United Nations Economic Commission for Africa and UNESCO for the purpose of, "... establishing an inventory of educational needs and a programme to meet those needs in the coming years," in order to promote economic growth and social progress on the continent (UNESCO/ED/180, p.2).

African delegates expressed strong support for technical and vocational education at the conference. They stated that this was necessary to solve the acute manpower shortages that were common in newly independent countries. They envisaged that by creating a pool of indigenous skilled labour, they would bring an end to their economic dependency on former colonial powers. Among its main recommendations, the conference stressed:

...the need to expand the curricula at the second level in the direction of more technical and vocational education.

Increased emphasis must be placed on adapting educational programmes at all levels and in most places to the needs of rural life.... curriculum must be in line with rural needs and interests. It must foster an appreciation of the importance

of agriculture to a nation and stimulate the modernization of agricultural methods. This approach is essential in raising agricultural productivity, in enriching rural community life, in decreasing the flow of rural youth to urban areas in search of jobs which are often non existent. (Report of the Conference of African Ministers of Education, 1961, p.6)

The 1961 Conference kindled a debate on educational developments in Africa and the current 'vocationalisation debate' on the continent. For the first time, educational policies and strategies for African countries were discussed jointly and a common plan produced to guide politicians, policy-makers and educationists for the coming two decades. Its timing was especially appropriate since colonial rule had or was coming to an end in most African countries. Educational reforms to review colonial policies and remove the inherent imbalances and disparities were therefore imminent. Education systems had been used by colonialists as a means to consolidate and perpetuate their hegemony and economic control.

The need to vocationalise secondary education was echoed continuously throughout the conference. While the provision of technical and vocational subjects in secondary schools was seen as necessary for industrialisation, the need to improve agricultural productivity was also emphasised. It was argued that schools had to foster positive attitudes and an interest in agricultural activities and a respect for manual work in rural areas. According to the Conference report, "In rural areas there should be the closest possible contact between the school and the whole life of the community, and education should not in fact distract children from the 'love of the land'" (p.48). The Conference acknowledged that life in rural areas had to be made more attractive first, in terms of facilities and amenities available.

None of the Conference recommendations raised as much controversy as those advocating a new emphasis in the provision of technical and vocational education. Noted among the first critics of the resolutions passed was Thomas Balogh, a British economist. His articles: "Catastrophe In Africa" (5 January and 9 February 1962) and "What Schools For Africa?" (23 March, 1962), encapsulate the core arguments of Foster's (1965b) 'Vocational School Fallacy' and the ensuing 'vocationalisation debate'.

The 1961 Conference of African States sparked a debate on the contributions of vocational education to economic development on the continent. Its recommendations aimed at promoting rural development through changes in school curricula, raised a lot of controversy. It advocated the provision of more technical and vocational education at secondary school level. Education programmes were to be oriented to the needs of rural life by drawing up school curricula in line with rural needs and interests. The teaching of agriculture was particularly emphasised in this rural-oriented development strategy. It was believed this would result in raising agricultural productivity, an improvement in the quality of rural life and thereby decrease the tendency of rural youth to migrate to urban areas in search of jobs that did not exist.

Responses to these recommendations form the core arguments of Foster's (1965b) article, "The Vocational School Fallacy" and the controversy surrounding vocationalisation of secondary education in developing countries. Critics followed two distinct lines of thought. First were those such as Thomas Balogh who believed that schools could be "... used as training agents for the production process, gearing their curricula and teaching to produce skilled people who can step directly into jobs" (in

Hanson and Brembeck, 1966, p. 160). Then there were those critics such as Philip Foster who argued that changes in school curricula did not have any meaningful effect on structural social and developmental changes.

The arguments raised by Balogh (1962) and Foster (1965b) in reaction to the recommendations of the 1961 Conference remain at the core of the dispute regarding attempts to vocationalise school curricula in developing countries. Balogh criticised what he saw as a focus on industrialisation rather than agriculture as a development strategy. He suggested that school curricula should take cognisance of circumstances in developing countries and concentrate on agriculture rather than replicate education systems in developed countries. Foster in turn disputed the notion that schools could be used effectively to bring about structural changes and stimulate economic development. Empirical evidence that has emerged since then is only confirming or refuting these postulations. It is therefore necessary to examine these arguments more closely.

3.3.4 Arguments arising from the 1961 Conference

(a) Thomas Balogh's arguments

Although his articles were largely critical of the recommendations of the 1961 Conference of African States, Balogh did not offer radical alternatives. The UNESCO Plan (as he called it), "... far from bringing about a rural renaissance¹ will render it impossible" (Balogh, 1962a, p.8). He speculated that the Plan would create a British- or French-style small elite with a disdain for technical, vocational and rural occupations.

¹The word 'renaissance' is not commonly used but according to the Collins English Dictionary it means "becoming active or vigorous again". Balogh's argument was therefore that the UNESCO Plan would not boost rural development.

He believed that since Africa was largely rural, its development was best focused around the land and the production of food, rather than industrialisation. In his view, Africa was not ready for this type of development. It is noted in the current study that African states were advocating development through improvements in both agricultural and industrial sectors. In view of the global economic trends, Balogh's suggestion to concentrate on agriculture before attempts at industrialisation would have been a naive development strategy for African nations. His suggestion does not take into account the existence of vast amounts of natural resources such as minerals, whose full benefits can only be realised through the capacity to process them locally.

Balogh argued that since most of the population in Africa was rural and depended on agriculture for survival, educational plans had to emphasise agricultural production. In his view, schools needed to be reoriented towards agricultural progress. He observed that the prevailing education systems in Africa, "... far from providing the economy with better and more trained manpower at every stage and level, was increasingly considered incompatible with menial jobs, ... especially agricultural labor" (in Hanson and Brembeck, 1966, p. 163). Balogh does not seem to acknowledge the fact that it is '*the land issue*' that intensified the conflict between the indigenous African population and the colonial settlers. The need to instill 'a love for the land' was therefore not the issue since this was already part of the African tradition. Colonial settlers seized the best land for farming and forced Africans to settle in unproductive areas. This contributed to the urban migration that Balogh proposes to control through manipulating school curricula.

Balogh attributed the prevalence of academic rather than technical and vocational

education in school curricula to the quest for 'equality' by Africans. He observed that Africans were conscious of the personal advantages that academic education brought about. Vocational education:

...was as much looked down upon as its products were disadvantaged. In the hierarchical structure of Africa, the technical and educational services were placed well below the (well-connected) general administrator. (in Hanson and Brembeck, 1966, p. 164)

In his view, these negative attitudes to technical and vocational activities continued even after the attainment of independence. Disparities in reward structures between administrators and technical experts and also between government services and the mass of the people continued to exist. This resulted in the perpetuation of an elitist education system that alienated rather than socialised and prepared pupils for rural life. It was therefore essential to develop educational programmes that gave priority to general education and training for rural advancement. It was necessary to move from a selective and elitist education to one that favoured mass advancement.

Balogh concluded that a completely new approach to African education that took cognisance of the prevailing conditions in Africa, was needed. Schools were to become pivotal not only in their traditional roles of imparting numeracy and literacy skills, but were to include agricultural activities, the improvement of rural life and the establishment of village industries. He warned that the tendency by African leaders to "... demand the same educational opportunities which rich countries have after they have become rich...", would lead to a 'catastrophe in Africa' (Balogh, 1962a, p.8). These arguments stirred widespread controversy and form the central point of contention of

Foster's article, 'The Vocational School Fallacy' and the subsequent 'vocationalisation debate' in developing countries.

(b) The Vocational School Fallacy

'The Vocational School Fallacy In Development Planning' (Foster, 1965b) is one of the most influential documents to emerge from the debate that followed the 1961 Conference of African States in Addis Ababa. The central theme of the article was that the prevailing belief that changes in school curricula would lead to improvements in rural and general economic development was mistaken. The recommendations of the 1961 Conference and numerous publications that were produced in response to it, particularly those by the British economist Thomas Balogh, seemed to take the view that economic development in Africa could be achieved by orienting school curricula more towards agricultural, technical and vocational activities. Foster (1965b) challenged these views and his article has become the 'locus classicus' of the 'debate' about attempts to vocationalise secondary education in developing countries.

In his widely quoted paper, 'The Vocational School Fallacy in Development Planning', Foster (1965b) criticised policies that emphasised school based vocational education, pointing out several contradictions between vocational education, the economy and the world of work. Concluding from his experience in Ghana, he asserted that the prevailing views in education policies, which accorded high priority to agricultural, vocational and technical education rather than the provision of substantially more "academic" types of instruction were, "...generally fallacious and ignore a series of crucial variables that must be taken into account... for stimulating economic growth..." (Foster, 1977, p. 356). He

challenged what he saw as the general tendency to give schools a central position in strategies intended to facilitate economic development. In his opinion, modifications to school curricula would not help meet the economic needs and intentions of social and economic planners.

Foster contended that rural and general economic development could be achieved by reviewing the structure of incentives within the economic system and by supporting entrepreneurial activity. The development of technical and vocational education had to depend on the existing and anticipated opportunities in the economy. He stated:

The provision of vocational education must be directly related to those points at which some development is already apparent and where demand for skills is beginning to manifest itself... (p. 364).

This recommendation implies that vocational education should only be provided in response to the needs of the formal sector of the economy, reminiscent of the current controversial 'market-driven' policies.

The 'Vocational School Fallacy' was first published in 1965 when belief in 'human capital' was still strong, particularly in relation to views on education in developing countries. A functionalist view of education was prevalent and it was generally believed among educational economists, sociologists, and planners that education did have a direct influence on social and economic developments. Although such deterministic views of education have since changed a great deal, the core arguments of the 'fallacy' continue to predominate current controversy surrounding vocationalisation of secondary education.

Foster (1977, p. 357) disputed, "... the general tendency to accord to schools a 'central' position in strategies designed to facilitate economic development." He criticised the belief that the prevailing education systems in Africa were to blame for lack of progress in rural development, a disdain for rural life and manual activities, and the migration of rural school leavers to urban areas. This was allegedly because school curricula were emphasising academic rather than agricultural, technical and vocational education. He disagreed with Balogh's observation that the development of negative attitudes towards agricultural activities and the flight to urban areas were caused by the emphasis that was placed on academic systems of formal education. This trend of thought, he observed, was widespread and included United Nations publications which regarded one of the chief educational priorities in economically developing countries as, "... the creation of a fully integrated system of agricultural education within the general framework of technical and vocational education" (p. 356).

Foster points out the paradox in the Ghanaian education system in which policy documents had always emphasised vocational and agricultural training, yet in practice school curricula remained largely academic. However, he does not acknowledge that such education was mainly limited to basic low-level skills which would not make the Africans 'too skilled' and challenge 'white supremacy'. He observes that on the whole, Africans demanded an academic type of education. This, he attributes to the perceived occupational opportunities within the exchange sector of the economy. African demand for academic education during the colonial period, Foster believes, was motivated by what they perceived to be the key to European-type occupational roles. In order to compete for the 'lucrative' high-status jobs, Africans found it prudent to acquire similar

qualifications to those possessed by the Europeans who dominated these jobs. Even after independence, the over-all structure of the employment sector remains largely unchanged and continues to prefer academic to technical qualifications.

He observes that "... academic education... is preeminently a 'vocational' education providing access to those occupations with the most and... the highest pay..." (Foster, 1977, p.360). Clerical and commercial employees were in higher demand and got higher remuneration than artisans. The demand for "academic" education therefore reflected the demands for alternative types of skill within the economy. According to Foster, although schools were criticised for being predominantly academic, the few school-leavers who had pursued the technical line experienced difficulties in obtaining employment and frequently ended in occupations which were unrelated to the training they had received. In this regard, Foster expresses a concern that individuals may be trained for jobs that do not exist. He argues that no amount of agricultural, technical and vocational education would make school-leavers seek employment in these fields if opportunities for higher remuneration existed elsewhere. Also, vocationalisation would not curb the migration of school leavers to urban areas unless there were viable opportunities existing in rural areas. These observations tend to be reinforced by the fact that employment prospects are concentrated in urban areas and reward academic rather than vocational qualifications. In spite of the rhetoric, development strategies remain focused on urban areas even after independence.

He contends that schools have little influence on vocational aspirations of pupils and that pupils do not have a disdain for manual labour. Concluding from his earlier study, he

asserts that, "... there is little foundation to theories attributing to the curriculum a major influence on vocational aspirations" (Foster, 1977, p.362). According to Foster, the problem is neither that pupils are not exposed to or do not engage in manual work, nor that they dislike working with their own hands. In a study involving 210 fourth form boys from nine academic-type middle schools in Accra in 1959, he found no predisposition to favour professional and "white-collar" employment. More than sixty-one per cent of them preferred artisan employment or farming. Only thirty per cent indicated a preference for "white-collar" employment, even though they were in academic tracks.

According to Foster, school-leaver unemployment is due to the education sector expanding at a faster rate than the economy. In such a situation, pupils' aspirations are influenced by the opportunities they perceive on the labour market, and not by the type of education they receive and since "... the crucial variables lie,... in the structure of incentives within the economic system and the degree to which the institutional milieu is supportive of entrepreneurial activity" (Foster, 1977, p.364). Accordingly, the demand for skills in the economic development process should determine the provision of vocational education and not the other way round. He suggests that the development of technical and vocational education should be based on the perceived opportunities existing within the economic structure. Its provision has to be related to those points at which some development is already apparent and where demand for skills is beginning to manifest itself. He argues that school-leaver unemployment is due to dysfunctions that exist between schools' output and the slow rate of expansion of occupational opportunities of all types within the exchange sector.

Foster (1965b) suggests that most vocational education programmes fail because they seek educational solutions to problems which are not primarily educational, but intimately bound up with intricate economic, technical and social variables. Schools only reproduce rather than change existing social, political and economic structures. It is contended in the current study that although curricula changes are not sufficient on their own, they still have an important role to play. In this regard, the suggestion to desist from the provision of vocational education on the basis that instead, changes should take place in the socioeconomic arena is a failure to acknowledge its contribution.

The 'vocational school fallacy' can be viewed from two broad theoretical perspectives. First, it can be viewed from an economic perspective, invoking the general debate surrounding the human capital theory. It can also be seen from a sociological perspective, particularly drawing from the debate surrounding the 'functionalist' approach to education and educational reproduction theories. These perspectives are discussed in more detail in the next chapter.

3.3.5 Critical review of literature

Research evidence disputing the efficacy of vocationalising school curricula seems to take a mainly economic perspective, based on scepticism about early 'human capital' views. The long term effects of providing vocational education remain speculative. There is no conclusive evidence to show whether or not the allegedly high costs of vocational education are justifiable in the long term benefits to national economies, labour market opportunities and the propensities of school leavers.

The methods of investigation and analyses of studies criticising vocationalisation of secondary education have been disputed. For instance, Psacharopoulos and Loxley's (1985) 'cost-benefit' arguments have been challenged in terms of the methodology applied in the study and for inappropriate interpretation of the findings. Cumming (1986) argues that these studies compared costs of schools with vocational biases, rather than costs of separate subjects. He contends that in Colombia, the variation in unit costs between tracks within INEMs are small. Foster (1984) however, considers the most convincing data from the studies as that concerning the external efficiency of the education systems in the two countries and argues therefore that the study was not methodologically suspect.

Discussing the policy implications of the Tanzanian and Colombian studies, Foster (1984) acknowledges that these studies had their limitations. Although he observes that the tracer component of the study should ideally have spanned a longer period, he is quick to point out that a longer time span would weaken the relationship between initial education and subsequent occupation and earnings. It appears that tracer studies which document differences continually, between vocational and academic graduates might provide more reliable evidence. Nevertheless, the comparison of the two types of education tends to reinforce the dichotomy and the view that vocational and academic education are alternative rather than complementary forms of education.

One of the main problems with the studies is that some of their conclusions are based on assumptions about the goals of vocational education in both Tanzania and Colombia without establishing whether they actually apply to the specific situations in either

countries. For instance, the provision of vocational education to 'cool down' pupils educational and career aspirations would contradict with Tanzania's 'education for self reliance'. The sociopolitical and economic contexts need to be taken into account in determining whether or not vocational or indeed education generally is meeting the desired goals.

Foster (1984) criticises the extrapolation of findings from the Colombian and Tanzanian studies, without considering the historical and contextual situations prevailing in the two countries. He highlights the tendency to group countries in terms of their levels of economic development without taking into account their rates of change. It is further contended in the current study that political and socioeconomic orientations of different countries should also be considered. Vocationalisation in Tanzania for instance, was oriented more towards ideological changes in the school curriculum than the immediate requirements of industry. Tanzania was actually trying to transform the capitalist education and economic system it inherited from the colonial period into a socialist oriented 'Ujama', as part of its goals towards 'education for self reliance'.

Despite these criticisms, the Tanzanian and Colombian studies have generated useful findings and highlighted important issues in the vocationalisation debate. However, caution is necessary in adopting the findings as a basis for evaluating educational provision in different countries under different circumstances. The Tanzania and Colombia studies had a limited economic objective and did not therefore take into account the possibility of providing diversified curricula purely on educational grounds (Foster, 1984).

The economic arguments that have come to dominate research and debate on the provision of school based vocational education seem to follow the human capital tradition. Initial impetus by the World Bank to develop diversified secondary school curricula was entirely based on economic considerations. Since Psacharopoulos and Loxley's studies were sponsored by the Bank, it probably explains why economic factors were their main concern. Foster (1984, p. 3) observes that, "These studies speak directly to the economic question though it is clear that they have gone beyond initial concerns." By including the question of internal efficiency in their analyses, it meant that the programmes could no longer be justified on the basis of the null hypothesis of whether they were neither better nor worse than conventional curricula. Their continued implementation or expansion had to be justified on the basis of evidence that they were 'superior' in terms of internal and / or external efficiency. Foster goes on to assert that the data from the studies did not support the latter criterion for implementation.

Psacharopoulos and Loxley's (1985) finding that vocational education is more costly is not surprising considering the fact that these subjects require equipment and materials, in addition to other provisions similarly required in academic subjects. What is crucial is the implication of this observation to educational policy. The costliness of educational provision should be considered in relation to both short- and long-term social and private returns and in consideration of other non-monetary educational and social benefits. Regression analyses and other statistical tests that were used to ascertain whether diversified or academic curricula yielded more benefits, are disputable. Foster (1984) argues that statistical significance has no policy implications unless the cost differentials are overwhelming, "...nor can any differences be unequivocally interpreted as

constituting 'school effects'." (p. 4)

The studies found no differences between pupils in diversified and those in academic tracks in terms of their aspirations to continue into higher education, and the transition rates. It was concluded therefore that vocational education was failing to distract pupils from aiming to continue their education beyond the secondary level. High aspirations only contradict the objectives of vocational education when such education is intended as a means of social control. When vocational education is intended to 'empower' pupils and help meet manpower requirements of a country, higher aspirations are actually a good thing.

Psacharopoulos and Loxley (1985) tested the hypothesis that curricular experience determined pupils' post-school aspirations and labour market outcomes. In Colombia, very little relationship was found between the subjects pupils studied at school and their post-school courses of study. In Tanzania, there was no relationship between programmes in lower and upper secondary school. In both countries, when school leavers entered the labour market there were no differences in their periods of unemployment or types and levels of employment. The income levels of vocational and academic pupils were similar. Foster (1984) rightly points out that pupil aspirations, expectations and destinations are influenced mainly by their perception of labour market opportunities rather than by school curricula. The current study contends that curricula also influence pupils' post-school aspirations and that the ability of pupils to work in occupations outside their areas of 'specialisation' is a strength rather than a weakness of an education system as often implied in literature.

Numerous studies have been carried out regarding pupils' educational and career aspirations. Studies by Dorsey (1975) Chivore (1989) in Zimbabwe all came to the conclusion that pupils had consistently high aspirations even though their expectations were moderate. This phenomenon has been confirmed by studies elsewhere in Sub-Saharan Africa (Foster, 1965 a & b; Clignet and Foster, 1966, and Lauglo and Narman, 1988). Considering the prevailing economic and labour market situations that are largely not conducive, pupils aspirations could be seen as too high. However, they reflect a persistent strong belief that education is an investment in human capital, in spite of its often negative labour market outcomes. Although pupils aspirations are influenced by their perception of the labour market opportunities, these aspirations are not totally determined by labour market situations. This is illustrated by the fact that pupils aspirations tend to increase inversely with decreasing employment opportunities. Escalating school leaver unemployment seems to increase demand for education. However, pupils' aspirations influence their acceptance or rejection of particular types of education.

Diversification was found not to result in equality of access and educational opportunity. Although education seems to have an influence, equity is interconnected to other factors such as political and socioeconomic orientations that cannot be addressed by changes in school curricula alone. Differentials in resources and the tendency of pupils from lower socioeconomic backgrounds to attend 'poor' schools is the question to be tackled in addressing the equity issue in education.

In Kenya, Lauglo and Narman (1987) found that practical 'industrial arts subjects' in

secondary schools were accorded high status (Lauglo, 1988). Similar findings were reported from Zambia (Kaluba, 1986), and Sierra Leone (Wright, 1988). The attractiveness of vocational subjects seems to depend on several factors, such as the opportunities in the labour market as perceived by pupils and parents. It has been suggested however that in adverse labour market conditions, pupils and parents might use vocational education as a 'trump card', to fall back upon if aspirations for higher education cannot be realised. Lauglo (1988) points out that this is only possible if vocational courses are offered as a small component of a mainly academic curriculum. In developing countries where technical occupations at higher levels are highly regarded, vocational education tends to be appreciated.

Cumming (1986) disputes the 'costs' conclusions from the Kenyan study. He points out that, "For reasons connected with the overall design of the study and the small period of fieldwork, (less than three weeks actually gathering data) the full rigours of costing were not applied." As noted earlier, it appears indisputable that the costs required to provide vocational education are generally higher than those incurred in academic. It is unlikely therefore that a longer period of investigation would have yielded different results. In fact, investigating whether vocational or academic education is more costly, does not seem to provide policy makers with any new information. Education budgets readily provide such information. It is the short- and long-term benefits that different curricula are likely to yield that seem to be of interest to policy makers. Cumming (1984, p. 29) concludes that, "Cost studies by themselves can do little to guide policy-making." Rather, it is necessary to depict the full outcomes of the education, including the indirect benefits accruing or likely to accrue from it.

In the SIDA sponsored study of practical subjects in Kenyan academic secondary schools, Lauglo and Narman (1985) found that students taking industrial courses in addition to academic ones exhibited a more positive attitude towards industrial studies. What seems to be the key to the success of the Kenyan study is the fact that pupils taking these courses do not forfeit the opportunity to continue into higher education. As Foster (1987) states:

...so long as vocational subjects are included within the rubrics of the normal examination system and are not discounted in terms of opportunities for further post-secondary education capable students will be less likely to eschew them. (p. 138)

In a review of Lauglo and Narman's study, Foster (1987) trivialises the findings suggesting positive views towards vocational subjects. He reiterates his earlier argument in the 'Vocational School Fallacy' and also widely supported among educational economists, that the relatively high costs of vocational subjects are not matched by its labour market outcomes. Referring to Cumming's costing of the programme, he dismisses the positive findings on the basis of 'the extraordinarily high costs associated with the SIDA programme'. Foster (1987) asserts that:

...when we control for SES² and academic achievement there is really no difference between IE³ and 'control' (academic) students in terms of aspirations for higher education, type of further study preferred, actual occupational destinations or level of employment. ...in terms of students' hopes of destinations it matters very little *what* pupils study but what *level* of examination pass they achieve in what is essentially a credentialist society. (p. 139)

² Socioeconomic status

³ Industrial education

The argument that the type of education does not matter but examination pass achieved and the notion of 'credentialism' are discussed in more detail in the next chapter. However, it is necessary to point out that the observation that no differences were found in the aspirations of pupils from different tracks after controlling for socioeconomic status is not necessarily a weakness of vocationalisation. Vocational graduates do not need to have lower aspirations. Many vocational education programmes have been assessed on the assumption that pupils following such courses should not proceed to higher education or seek employment in careers other than in unskilled and semi-skilled areas. Psacharopoulos and Loxley's (1985) study for instance, regarded the high aspirations displayed by vocational students as indicating a failure of such education.

It is the contention of the current study that vocational education should give pupils the opportunity to enter directly into employment, training or continue with their education. Most developing countries face acute shortages of skilled personnel at higher levels, particularly engineering and related areas. Also the current tendency of students leaving school with academic subjects only, taking up technically related degrees does not seem to produce the same calibre of graduates as would be the case if such students had technical skills before entering university. Students would arguably benefit more if they understood structures and their materials both practically and theoretically before enrolling for engineering, architecture and other technically oriented degrees. The courses at university could even be more advanced if students did not have to start with work which should have been covered at secondary school through vocational courses.

The high levels of aspirations to enter post-secondary education exhibited by African

secondary school pupils, as several studies have shown, is not inimical to vocational education goals in developing countries. It is the contention of this study that pupils' aspirations to higher or further education in themselves are not an indication of their dislike of vocational occupations. They might still want to pursue technological courses but at higher levels. Higher aspirations are of course problematic where pupils' school performance is low and unlikely to enable them to realise their ambitions. This is however a common problem not only with vocational pupils but academic ones as well.

Foster (1987) criticises the high level of resources provided for the Kenyan thirty-five government-maintained technical secondary schools included in Lauglo and Narman's (1985) study. He questions the rationality of providing the generous funding to schools which he regards as already privileged in the country in terms of resources and the socioeconomic background of students. In his opinion, such funds should have been made available to the poorly resourced ones. The current study disagrees with this viewpoint since the success of vocational education seems to be related to the amount of resources made available for specific programmes. For that reason, vocational education programmes are therefore likely to succeed where only a few are instituted so that they are allocated more generous resources. Evidence from the Brazilian SENAI and SENAC seem to confirm this view. Most programmes seem to fail due to insufficient funds and poor implementation rather than the numerous other factors that are often cited in the vocationalisation debate.

If the hypothesis that the amount of resources available has an influence on programme success, it follows therefore that vocational education in most developing countries

should be restricted to just a few pupils. Attempts to provide such programmes on a large scale only results in numerous poorly resourced ones which are therefore prone to failure. If its provision is restricted to just a few pupils however, this raises the questions of social class disparities unless ways are found to open access to pupils from lower socioeconomic backgrounds as well. As discussed in the next chapter, the creation and maintenance of 'elite' schools perpetuates social class disparities that have been debated extensively in both developed and developing countries but to no avail. Foster's critique of Lauglo and Narman's findings in Kenya seem to suggest that the interpretations made depend on the researcher's assumptions and perceived goals of such education.

Psacharopoulos and Loxley (1985) acknowledge that apprenticeship programmes in Israel are more cost-effective than formal vocational education programmes. However, they attribute this to Israel's highly egalitarian system in which, "...high school diplomas do not carry much greater weight in the labour market than do primary school certificates" (p. 29). Their other explanation of the cost-effectiveness is that in Israel, formal education is more expensive than apprenticeship programmes.

Generally, since the beginning of the 1990s, research interest in vocationalisation of secondary education in developing countries seems to have waned. What seems to emerge from available literature is that research findings and conclusions drawn from these, seem to depend on the perceived objectives of vocational education. Assumptions about the rationale behind the provision of vocational education tend to disregard the peculiarities prevailing in the different countries. As Lauglo (1988) points out, "...the role played by schooling in allocating life chances is context bound" (p.2). Explaining

how "ethnocentric bias" can be a problem in comparative research, Watson (1994) points out the need to recognise that "... education systems are context specific and the underlying philosophy and assumptions in one context might be substantially different from another" (p. 93).

Governments have generally paid little attention to the findings which denounce vocationalisation of school curricula. There is no empirical evidence to explain why they remain attracted to vocational education policies. It seems however that the reasons are both economic and political. Developing countries are faced with deteriorating economies and worsening school-leaver unemployment. Governments have responded to this situation by advocating the provision of vocational education in schools. This is intended to equip pupils with skills that are relevant to the labour market. It is assumed that providing pupils with vocational skills enhances their employment prospects and provides the necessary manpower for industrial and economic development. What seems to impel the governments in developing countries to emphasise vocational education in schools is that while unemployment is worsening, skilled manpower continues to be in short-supply. Pupils leaving school are found to lack the skills required to join the commercial and industrial sectors or to start their own ventures. Technical expertise continues to be provided by 'expatriate' personnel while school leavers remain unemployed. Vocational education is therefore seen as essential in providing an indigenous pool of skilled workforce-force and expertise on which economic development seems to depend.

Schooling is increasingly concerned with the preparation of pupils for self- or informal

sector employment due to the realisation that mass employment in the formal sector will always be a myth in post-colonial developing countries, at least for the foreseeable future. In practice however, conditions for self-employment are not conducive for school leavers who lack the financial resources, experience, motivation and management skills.

Research studies have focused on the viability of school based vocational education in meeting labour market requirements. They have investigated whether vocational and non-vocational graduates have different opportunities on the labour market. The following variables are generally invoked in these investigations: socioeconomic background characteristics; cognitive and general aptitude measures; educational and occupational aspirations; and attitude measures. Psacharopoulos and Loxley (1985) included what they termed 'non-cognitive or modernity outcomes', based on McClelland's (1961) motivation factors and Inkeles and Smith's (1974) traditional-modern axis of personality traits.

These variables are based on perceptions that are commonly held about the objectives of vocational education and pupils' career choices. One such perception is that there is a mismatch between the type of education offered in traditional academic schools and the skills and other characteristics that the labour market expects of pupils leaving school (Foster, 1965; Chapman and Windham, 1985; Sifuna, 1986; and Lauglo and Lillis, 1988). This is the original rationale behind the provision of vocationally-oriented programmes in attempts to bridge the gap between the school and the labour market. These programmes seem to be unsuccessful and research studies have concluded that such attempts are futile. It is argued that labour market skills are best provided after

formal schooling. Schools are believed to be inappropriate because they have neither the equipment nor the personnel to prepare pupils adequately for employment. As discussed earlier these arguments are controversial and policy decisions to vocationalise or not are largely based on intuition and speculation, rather than conclusive research evidence.

The 'adequately prepared school-leaver' portrayed in anti-vocationalism arguments seems to be one who can start working straight from school, without requiring further training. This seems untenable even when training is provided outside formal schooling. Most people joining the formal employment sector need some form of training initially and in-service training at regular intervals. Technologies and modes of production are changing so rapidly that even people trained on the job will soon need further training. In most occupations, pre-employment training provides initial skills only and make people trainable in particular occupations as new technologies and modes of production are introduced.

The current study takes the view that it is not the specificity of skills one possesses upon entering employment that is crucial, even though this might be desirable. Rather, it is the qualities of versatility and readiness to learn new concepts and acquire new skills that modern production systems seem to require. Modern work practices do not require people who are only thoroughly skilled in specific areas, but unable to adapt to new requirements. The rapidly changing technologies call for people who are technologically literate and versatile. From this perspective, investigations into the relevance of school curricula to the world of work should include deeper analyses of the content of specific subjects as well as teaching approaches. It is prudent therefore, to examine whether or

not pupils are technologically literate and possess problem-solving skills. Research work that seemed to address this issue was that on the application of 'design education' and 'problem-solving approaches' in the teaching of vocational subjects, (e.g. Eggleston, 1973), but it appears to have stagnated. Describing design and technology as key elements in school curricula, Barnett (1991) observes how in the United Kingdom,

... craft teaching is indeed undergoing a transformation which is taking it far away from its traditional concerns with manual dexterity, 'hand-and-eye' training and its former (gender-divided) subject base. (in Young and Barnett, 1991, p.19)

Research studies have also hypothesised that academic education exaggerates the educational and occupational aspirations of pupils leaving school. This is believed to instil in pupils a yearning for university education and highly valued jobs. Vocational education on the other hand, is believed to make pupils accept lower levels of education and less prestigious occupations. It is said to "...ensure that more students, including those with less advantaged backgrounds, receive education and training better suited to their own social and economic conditions and the needs of their nations." (Psacharopoulos and Loxley, 1985, p. 4). This seems to imply that vocational education makes pupils aspire to less valued 'blue-collar' occupations which are assumed to require lower levels of education. This is a myth based on traditional notions in which such education was intended to prepare pupils from lower socioeconomic-economic backgrounds for the less prestigious manual occupations in industry. Such policies are strongly opposed by both pupils and parents whose aspirations and expectations are influenced by labour market forces rather than policy formulations. It is the contention of the current study that one of the weaknesses of vocational education programmes is

that attempts to improve them tend to be mainly in rhetoric. Goals are made to sound more appealing without addressing the real dysfunctions that militate against pupils graduating from such programmes. Policy makers and politicians do not seem to realise the fact that it is not the stated goals that influence pupils and parents but the actual labour market outcomes.

Educational economists seem to take the unequivocal stand that one of the goals of vocational education should be to lower the aspirations of pupils. Although this might seem sound economics in the short term by lowering the demand and therefore expenditure in higher education, this would not be in the long term interests of developing countries. The countries need education systems that maximise rather than curb the potential of pupils and marginalise sections of the populace as characterised by colonial systems. Vocational education perceived along these lines has been regarded by critics as a means of social control. It has raised questions of equity, which educational sociologists have invoked in social reproduction arguments against the provision of vocational education. Educational reproduction theories and their implications to vocational education are discussed in Chapter 4.

Providing vocational education for the purpose of inhibiting pupils' aspirations, entails limiting such education to the provision of lower level skills. It therefore restricts pupils' opportunities to the less lucrative, semi-skilled occupations. It is usually offered to pupils in lower streams and is meant to keep pupils from lower socioeconomic-economic backgrounds out of contention for lucrative jobs. Colonial education was modelled along this principle in which vocational education was intended to limit the academic progress

of the indigenous people. Research studies taking this view of vocational education conclude that it has failed when pupils continue to aspire, or even get to higher levels of education and occupations.

In most developing countries, schooling brings about socioeconomic advantages that bring about social mobility. Indigenous people in post-colonial states tend to regard their disadvantaged social status as a colonial legacy which they can change. They are therefore unlikely to accept an education that is 'suited to their own social and economic conditions' and leads to 'less prestigious jobs'. For this reason, vocational education is rejected as long as it does not lead to labour market opportunities and socioeconomic mobility.

In situations where vocational education leads to lucrative employment opportunities, pupils seem to accept it. Most third world countries have chronic shortages of qualified personnel, especially in highly skilled areas and these technical occupations are therefore well-paying. In Zimbabwe, pupils have always yearned to enrol into apprenticeships and qualify as skilled electricians, diesel fitters and tool makers and similar trades. However, throughout the colonial period Africans were almost completely excluded from apprenticeship training since they were not meant to be highly skilled. As in all other relatively lucrative occupations, the few who were fortunate to be taken tended to be recruited from academic tracks. The main reason why academic pupils were preferred appears to be that pupils in vocational tracks were those with lower academic ability who did not have mathematics and science subjects that are required at apprentice level training. Courses offered at polytechnics and other vocational training institutions,

require proficiency in both cognitive as well as manipulative skills.

The tendency of research studies to regard the requirements of the formal employment sector as the main determinant of education policies does not seem appropriate in most developing countries. This is especially true in post-independence, 'transition' states which are still in the process of redefining their social and economic structures. They tend to give education a proactive role in their attempts to transform their socioeconomic systems.

3.4 Persistent interest in vocational education

Most of the available literature paints a sombre picture of school-based vocational education programmes. Critics vary from the moderate, who criticise only specific programmes because of the way they are implemented but believe that it can work if properly conceived, to the extreme anti-vocational 'campaigners' (mainly economists) who see no prospects at all in such education. Moderate anti-vocationalists acknowledge some but only limited success in vocationalising school curricula, irrespective of the strategy or pattern adopted (Lillis, 1989; Lauglo and Lillis, 1988; Lauglo and Narman, 1989). Lillis (1989) accepts that within specific conditions, vocational education programmes can lead to brighter employment prospects. Extreme anti-vocationalists dismiss such education altogether. Being mostly economists, they assess vocational education programmes using cost-benefit and rate of return analyses. They are mainly concerned with the outcomes of education in relation to the economic benefits, in the form of social or private returns to education. The human capital theory on which most of these arguments are based is discussed in Chapter 4. There seems to be a consensus

that on its own, vocational education is not the panacea for the failure of economies to curb rising unemployment, 'inflated' aspirations of school leavers and escalating migration from rural to urban areas. However, there is no conclusive evidence showing that vocational education cannot meet specific objectives in particular situations. Its long term effects on enhancing 'autonomy and a sense of well being' (espoused in philosophy as one of the aims of education) are not known.

Contrary to the negative empirical evidence emerging internationally, school based vocational education remains attractive to policy makers globally. In spite of numerous constraints and even though their attempts seem to be largely unsuccessful, governments in most developing and many developed countries continue to stress the provision of vocational education in schools. A survey of education systems in several countries shows that vocational education is regarded as a priority in most policy statements, both in developing and developed countries (Postlethwaite, 1988). Vocational education is believed to equip pupils with skills that are relevant to the world of work and economic development.

Lillis (1989, p. 89) observes that, "... despite the very poor track record of success, the problem of articulating schooling with work remained a priority development issue on the global agenda". This seems to result from attempts by governments to seek solutions to ailing national economies, amidst persistent social demands. The literature discouraging vocationalisation of secondary education has not convinced policy makers to adapt alternative strategies to resolve the paradoxical problems of youth unemployment existing while there are shortages for skilled manpower. The suggestion

to stress more academic rather than vocational forms of education has received widespread support among academics and development and aid agencies. However, it contradicts the common criticism that school curricula are too theoretical and unrelated to the realities of working life. Curricula in most developing countries are already largely academic and the introduction of vocational education is actually a response to the failure of these curricula to prepare pupils for working life and the criticism that existing education is 'irrelevant'. Also, the proposition to leave training to be done at the workplace is rather illogical when the problem is that there are insufficient job opportunities for the large numbers of pupils leaving school every year.

Academic education has become 'the ideal education' that is fiercely contested for by both elites and lower socioeconomic-economic pupils. The pursuance of elitist education in both developing and developed countries has meant that, "Vocational education remains little more than hollow rhetoric, offered in a way which at least allows the illusion of a meritocratic basis of school selection" (Lewis, 1991, p. 97). Nevertheless, it has remained at the top of educational policies with rhetoric support from both politicians and educationists. Interventions by politicians advocating vocationalisation of education and the introduction of successive schemes to vocationalise school curricula are a common feature in both developing and developed countries. The setting up of the Zimbabwe Foundation For Education With Production (ZIMFEP) at independence and more recently, the New Structure and Content of Education which introduced the Zimbabwe National Craft Certificate (ZNCC) and the subsequent National Foundation Certificate (NFC) pilot schemes illustrates this point. In Britain, this concern is evidenced by former Prime Minister, James Callaghan's Ruskin Speech in 1976 and the

diversity of programmes and schemes introduced since then. The recently introduced National Curriculum in England and Wales stipulates that schools should offer technological education to all pupils between the ages of 5 and 16 years. Also, the introduction of the BTECH alongside the traditional academically oriented 'A' levels and the National Vocational Qualifications (NVQs) show continued interest in vocationalising school curricula at all levels. Lewis (1991) observes similar trends in the United States and describes the vocationalism debate that arose from the setting up of the National Commission On Excellence In Education. However, he observes that in spite of all these initiatives in the USA, vocational education continues to offer less employment opportunities generally and is perceived as suitable for the underprivileged and unworthy of the 'elite'.

Lillis and Hogan (1983) believe that one of the main reasons why vocational education continues to be implemented in spite of the increasing literature discouraging its provision is that policy-makers are not familiar with the literature. They postulate that even if they were familiar with the literature portraying a very poor track record of 'success', attempts to link schooling to the world of work would still remain at the top of educational policies in both developing and developed countries.

Most of the literature seems to acknowledge that the views castigating vocationalisation of secondary education are generally ignored. The reasons why there is sustained interest in vocational education have not been investigated. In developing countries where such programmes were previously supported by international donor agencies such as the World Bank, policy-makers seem to be fully aware of the scepticism now surrounding

vocationalism. Aid for such education has been discontinued and the World Bank (1991) in particular, has explicitly enunciated why it is no longer supporting these programmes. Nevertheless, policy-makers continue to implement the programmes, even without donor ^{or} aid financial support and in spite of their own restricted budgets.

3.5 Goals of vocational education

The commonly stated aims of vocationalisation are 'labour market relevance' and 'equity considerations' (Psacharopoulos, 1986; Lauglo and Lillis, 1988). Nevertheless as illustrated in Bacchus' observation, vocational provision is often viewed as mere 'political rhetoric' masking "...strong political motivations to use vocationalised programmes as a means of lowering occupational aspirations to more 'realistic' levels as well as to meet lower-level manpower needs" (Lauglo and Lillis, 1988, p.9). They observe that vocationalisation has a political appeal as an educational response to economic problems.

Advocates of school-based vocational education tend to overestimate the absorptive capacity of the labour market, particularly in developing countries. Policy-makers often fail to assess realistically, employment opportunities available for school leavers. Consequently, the vocational subjects offered in schools have little or no bearing on manpower requirements and at the same time do not meet post-school aspirations of pupils. Schemes designed to prepare pupils for specific occupations are rarely preceded by surveys to determine the skills required not only in the formal sector but also for self-employment and the extent of provision necessary to meet them. Usually, vocational subjects offered in schools are limited to the traditional ones such as woodwork,

metalwork, agriculture and building whose content are often outmoded. This results in shortages in skilled personnel existing while school leavers, including those from vocational streams, fail to get jobs. Even where some jobs might exist, the tendency to restrict vocational education to the traditional craft skills means that some areas are oversupplied with semi-skilled people while shortages remain in highly skilled areas. The content of these subjects is neither matched with the requirements of the formal nor informal sectors of the economy. The extent to which vocational education should be designed to meet the immediate skill requirements of industry is one of the major challenges confronting curriculum planners. This is particularly so in the prevailing economic situations in most developing countries and even developed countries. Labour market opportunities are limited and it is often argued that no amount of training will create jobs. However, to stop training because the formal sector cannot absorb the school leavers implies maintaining the inherited economic systems as given and school-leaver unemployment as inevitable.

As Lauglo and Lillis, (1988) observe, egalitarian values are also invoked in support of vocationalisation. This is especially true in newly-independent countries inclined towards a socialist political ideology (Carnoy and Samoff, 1990). Education reforms inevitably emphasise 'equality of educational opportunity' to meet people's expectations and rectify colonial social and racial disparities. Contradictions however arise due to legacies that continue to prevail. People's attitudes, aspirations and institutional structures and practices continue to be influenced by colonial experiences. Vocational education continues to be regarded in its colonial context in which its provision was limited to low-level skills and did not therefore lead to gainful employment.

The pattern of vocational education that is adopted has implications on the outcomes of such education. The different vocationalisation models tend to have similar overall goals, with differences only in the level of emphasis placed on particular objectives. Lillis and Hogan (1983, p. 89) identify some of the goals that are often stated in policies as:

- (a) to alleviate unemployment;
- (b) to reorient pupils' attitude towards rural society;
- (c) to halt urban migration;
- (d) to transmit skills and attitudes useful in employment.

Research studies also include the lowering of pupils' educational and career aspirations as one of the goals of vocational education programmes. Although distinctions are sometimes made between 'diversified', 'pre-vocational' and 'vocational education' as stated in Chapter 1, the different patterns of vocationalisation tend to be regarded as though they had similar objectives. The stated goals of vocationalisation programmes tend to be similar irrespective of the pattern being implemented. Inconsistency in relating patterns of provision to particular goals is a common problem with policy makers, practitioners and researchers. This in turn presents difficulties in both its provision and assessment. It is contended in the current study that it is crucial for the goals of specific programmes to be matched with vocationalisation patterns most likely to achieve them. Clarification of the purposes intended to be served by specific programmes not only helps identify methods of provision, but also the target population. Programmes intended to prepare pupils for self-employment for instance, would be provided differently from those offered to pupils likely to proceed into higher or further education. While the former would be more suitable for pupils likely to leave school at

the end of their secondary education, the latter would be for those aspiring and likely to continue beyond secondary education.

As Lillis and Hogan (1983) point out, vocational education in both developed and developing countries suffers from a lack of clarity of its aims and intended outcomes. There is general confusion regarding whether what schools provide should be 'pre-vocational', 'vocational' or just part of the broad general education of secondary schooling. This confusion is apparent among politicians, educational planners, schools and researchers. There appears to be a general assumption that the main purpose of vocational education is to meet the requirements of employers. In developing countries however, and even in developed capitalist economies, unemployment is rife and the notion of gearing education to meet the needs of the formal employment sector is both unrealistic and unreasonable. This raises the question of what then is the purpose of vocational education if it does not lead into a 'vocation'. The answer is probably a need to redefine and reconceptualise the whole notion of 'education and employment' and 'education and economic development'.

The vocationalisation pattern that is adopted, the range and content of vocational subjects, the pupils targeted, its specificity and the intensity of its provision all hinge upon the goals that vocational education is intended to achieve. Vocational education cannot be fully assessed unless the specific goals of individual programmes are clearly perceived. A large proportion of the controversy surrounding vocationalisation of secondary education is due to the misconceptions held about its intended outcomes.

Lillis and Hogan (1983, p. 96) argue that because the goals of vocational education are ill-conceived, its provision is "... heavily skewed... towards academic subjects and leaving wholly insufficient time for work-experience goals - thus further widening the gap between schooling and the reality of work." They reiterate Hanson's (1977) argument that vocational education offered in schools is often unrelated and irrelevant to the needs of industry. The criticism that school-based vocational education does not meet the expectations and needs of employers dominates the vocationalisation debate. However, as Oxenham (1988) points out, employers are not a homogeneous group with consistent and readily identifiable expectations from schooling.

Rapid technological changes in work places make any attempts to match schooling to the world of work an impossible task. A vocational education curriculum that is 'relevant' is therefore one that inculcates the fundamental principles and literacy in technological concepts and practices. There is need to shift from the emphasis on content and specific skills to broad principles and processes of production based on problem-solving and critical thinking.

Lillis and Hogan (1983) suggest translating economic and political intentions into educational programmes that attempt to create knowledge of social worth. They concur with Blaug that such knowledge is rather of attitudes and values rather than manual skills and factual information. Acknowledging the fact that educational programmes cannot be content-free, they suggest that the crucial task is to incorporate both manipulative and cognitive skills in contents that are process- rather than content-based or that emphasise specific skills. The curriculum should impart skills that are

generalisable to a range of situations. They support Blaug's advice to avoid the naive interpretation that there is one kind of education which has nothing to do with the world of work and another called vocational education which is firmly geared to the 'manpower' needs of a 'growing economy'.

The failure to relate programme goals to patterns of provision is one of the main reasons why programmes fail to meet the intended objectives. The alternative approaches to the provision of vocational education that have been instituted have tended to be differentiated by their inclusion or exclusion of pupils from particular socioeconomic backgrounds or by the amount of school time involved. Lillis and Hogan (1983, p. 89) identify three patterns of vocationalisation that have emerged within formal systems of education.

3.6 Patterns of provision

3.6.1 Vocationalisation of the entire education system

This involves the integration of education and labour as practised in socialist models of vocationalisation. Attempts are made to implement overall ideological goals by fostering through education, positive attitudes towards manual work. The major characteristic of this pattern is that even academic subjects are regarded as both theoretical and practical in essence. The linking of theory and practice and the application of theoretical knowledge to everyday real life situations is the major objective. The integration of work and study in China; 'education for self reliance in Tanzania'; and 'schools to the countryside' and 'schools for the country side in Cuba' are examples of such attempts (Lillis and Hogan, 1983). The introduction of the Education With Production pilot

scheme in Zimbabwe soon after independence was an attempt to emulate this model.

Since it is integrated into the whole curriculum, it is hoped that such vocationalisation eliminates the academic / vocational divide and the tendency to track pupils according to their socioeconomic background. While it has been relatively successful in both China and Cuba, it has met limited success in Tanzania and Zimbabwe. The major contributing factor appears to be the existing economic systems which have been largely contradictory to the socialist goals, in the latter two cases. The high costs required for vocational education have made it impossible to vocationalise their entire educational systems. Also, this model is mainly ideological and implies changes in approaches to schooling without leading to any certification and has therefore failed to survive in education systems that emphasise individualism and are examination oriented. The next chapter discusses how the inflation of educational qualifications (credentialism) has become a major factor in the increasing demand for more schooling.

3.6.2 Parallel vocationalised systems

Separate vocational schools are provided parallel to the traditional academic ones. The schools are intended to provide pre-vocational skills for pupils who cannot be absorbed at higher levels of education. It is aimed at making pupils employable by equipping them with intermediate skills while at the same time lowering their educational and career aspirations. However, policy statements stress the need to prepare manpower for economic growth as the major objective even though this contradicts the fact that the programmes target less able pupils.

This form of vocationalisation has received widespread criticism because the vocational schools have generally become almost exclusively for pupils from lower socioeconomic families. Pupils graduating from these schools are 'labelled' as less able and have less employment opportunities than those from academic ones. Lillis and Hogan (1983, p. 90) point out that, "...the magnet of the academic schools destroys many of the desirable goals of such initiatives." Exceptions such as the SENAI and SENAC schools in Brazil have tended to be dominated by pupils from upper socioeconomic backgrounds.

In Zimbabwe the colonial junior secondary (F2) schools were established parallel to the academic oriented F1 secondary schools, to absorb the majority of pupils who were not expected to proceed to university. They were intended to prepare a few pupils for semi-skilled occupations in agriculture, commerce and industry but the majority for informal occupations in their rural communities. As discussed in Chapter 2, the schools failed to overcome the attraction of the academic oriented F1 schools and were perceived by both parents and pupils as inferior and therefore rejected.

The Zimbabwe Foundation for Education With Production (ZIMFEP) schools established as pilot schools at independence failed as a pilot scheme. This was largely due to the attraction of the academic schools which they were intended to replace. Since there were only eight ZIMFEP schools in the whole country, they were overwhelmed by the existing examination oriented academic education system. They were therefore 'conventionalised' by the very schools they were intended to 'revolutionise'.

It appears therefore that as long as other schools remain academic, establishing separate vocational schools is not a viable proposition. Unless they lead to better employment opportunities, pupils only end up in such schools when they have failed to get academic places. This is not necessarily an indication of a dislike of vocational education but of the perceived labour market opportunities. In a survey involving 2384 Form IV African school leavers in Rhodesia, Russell (1978, p. 8), found that many of them felt that the school curriculum should have been more practical and job oriented. Paradoxically, this was at the height of a strong resentment of the vocationally oriented F2 secondary schools discussed in chapter 2.

3.6.3 Component of the core curriculum

Vocational subjects are introduced into largely academic curricula and made compulsory for all pupils. The intention is to include a vocational element as part of the core curriculum for all pupils. This is in response to the criticism that vocational education 'targets' pupils from lower socioeconomic backgrounds and promotes social class disparities. This model of vocationalisation is almost similar to the 'diversification of the whole education system' discussed earlier in section 3.6.1. However, the earlier version which is usually related to socialist models of education is more of an approach, involving both academic and vocational subjects rather than an introduction of specific subjects.

School curricula in Zimbabwe generally offer technical subjects as 'components of the core curriculum'. All pupils are expected to take at least one practical subject (technical, agricultural or commercial) alongside their academic subjects, during their first two

years of secondary education. The subjects are provided as part of the general education of pupils or as pre-vocational courses. They are not necessarily expected to lead to direct employment. The vocational subjects offered depend on the location of schools, but generally rural schools tend to offer building, agriculture, fashion and fabrics, technical drawing and commercial subjects. Those in urban areas have more options due to the availability of electricity and their proximity to sources of perishable supplies. They generally offer subjects such as woodwork, metalwork, food and nutrition, fashion and fabrics or technical drawing.

This form of vocationalisation is criticised for being too 'academic' and for not preparing pupils for direct employment upon leaving school. The successive introduction of the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) pilot schemes were attempts to overcome this alleged shortcoming of technical subjects offered as part of general secondary education. They both arose out of the need to meet specific industrial and commercial skill requirements. Labour market outcomes of either schemes have not been encouraging. However, as discussed in chapter 4 the reason why pupils fail to get jobs is not necessarily because they are not skilled, but is also influenced by broader social, political and economic factors.

Unlike the colonial F2 schools, post-independence vocationalisation has kept options open for pupils to pursue further or higher education in academic areas. However, vocational subjects are not recognised as valid 'O' levels for entry into higher and further education. Pupils intending to proceed to university and academically inclined school heads tend to regard the subjects less seriously. They prefer instead academic

subjects which carry more weight on school-leaving certificates. However, pupils wishing to go for technical or commercial training seem to show a more positive attitude towards vocational subjects. This is particularly the case when such vocational courses stipulate pre-training experience as an entry requirement. This is increasingly becoming the case at polytechnics, vocational training centres, and technical teachers colleges.

3.7 Overview

McMahon (1988) questions whether the benefits of vocational education are worth the costs and concludes: "sometimes yes; sometimes no" (in Lillis, 1989, p. 98). McMahon observes that, "The evidence suggests that under certain conditions they definitely are; under certain conditions they are not." (p. 189) He asserts that vocational and technical subjects are unlikely to be cost effective unless they have internal efficiency. Factors like high drop-out rates, the time taken to complete programmes and other sources of internal inefficiency influence the success of vocational education programmes. McMahon observes that if there are no post-school vocational education courses then:

...vocationally oriented courses complementary with the general education can be quite productive and the benefits are likely to outweigh the costs. Similarly, to develop endogenous skills where none exist, but which are basic to a nation's development, some formal technical education embodying the relevant technology would appear essential, even when the longer run returns are not fully reflected in the current earnings. (p. 191)

He points out that providing separately tracked vocational schools is not only likely to contribute to dual labour markets and greater social polarization, "... but it also leads to less equity in income distribution in the next generation than could be achieved with the same resources invested in primary education" (p. 191). In his opinion, equity is more

likely to be achieved by first expanding and strengthening primary education than expanding vocational education at secondary level. Where such provision already exist however, vocational education might be effective. He suggests that the benefits of vocational courses are likely to exceed costs when the courses are developed in an efficient balance with general education:

Where this balance is distorted due to external forces or internal deficiencies within vocational/technical curricula, then greater attention needs to be given to the economic returns to general education and its relation to learning on the job, and the rate of vocational/technical education expansion slowed down. (p. 191)

Although McMahon acknowledges the arguments against its provision, he nevertheless acknowledges that vocational education can be viable, depending on prevailing conditions. It follows therefore that individual situations should be investigated in order to identify factors influencing individual vocational education programmes. The finding that vocational education can be feasible in specific circumstances concurs with Lauglo and Narman's (1989) observation in Kenya. Lauglo (1986) reiterates the assertion that no international law exists by which school-based vocational education is inferior to purely academic education in terms of quality of intake or examination results. While lack of labour market benefits might be common, Lillis warns that this cannot be generalised. The benefits of vocational education should not be only assessed in relation to labour market outcomes, but also from a pedagogical point of view. Foster (1987) points out that, "... it must be recognised that the major criticisms of vocational and technical training have all rested on internal and external efficiency and not 'educational' arguments." (p. 138)

As Lillis (1989) remarks, with a few exceptions such as Young's (1988) collation of studies in the interrelationship between schooling and the world of work in Brazil, there has been little exploration of the epistemological questions. He observes that:

Lauglo and Narman (1989) raise certain challenges to established theory in their passing references of social reproduction in Kenya, but on its own does not provide an illuminative theoretical basis of vocationalisation. It might be that the answer to Psacharopoulos [To Vocationalise or not to Vocationalise? That is the Curriculum Question?] will emerge from utilising Finch's [in Pollard et al, 1988] methodologies to raise questions about appropriate vocational epistemologies. (p. 99)

The following three broad themes have emerged from the literature survey on the vocationalisation debate; economic, sociopolitical and pedagogic arguments.

3.7.1 Economic arguments

Arguments in support of vocational education maintain that formal education should be oriented to the world of work to meet manpower demands for skilled labour and prepare pupils for specific vocational fields. Proponents advocate the inclusion of vocationally oriented courses in school curricula to link schooling to the world of work. This notion of education related to functionalism (Durkheim) and a belief in human capital assumptions is probably the strongest force influencing vocational education policy. Although empirical evidence has generally disconfirmed this belief, policy makers remain attracted to the seemingly common sense rationality of orienting schooling to the needs of production and the economy. To parents and pupils however, there is an ambivalence regarding acceptance or rejection of vocational education courses; it depends on the perceived labour market opportunities. International donor agencies such as the World Bank and educational economists supported vocationalisation of school

curricula during the 1960s but have since shifted from this viewpoint on economic grounds.

Critics of vocational education have mainly argued from the economic efficiency perspective. They argue that vocational education is too costly and most schools cannot afford the resources required to implement it. Their main point of contention is that the costs of such education are not matched with either the private or social benefits. They argue that vocationalising school curricula does not improve the productivity of individuals and does not enhance their employment opportunities. Educational economists who mostly hold this view support their arguments through cost-benefit analyses and have come to the conclusion that vocational education neither reduces youth unemployment nor promotes economic growth. They point out that vocational education is more costly than academic and is therefore inefficient as an educational strategy. Economic arguments are pursued from a theoretical perspective in the next chapter. It is argued in the current study that the empirical evidence on which economic views against school-based vocational education are based only explain the status quo and not the underlying factors.

3.7.2 Sociopolitical considerations

Critics of the economic efficiency arguments have mainly been educational sociologists. Their views are mainly based on equity considerations, arguing that tracking pupils into vocational and academic streams produces long-term inequalities and a perpetuation of social class disparities. They see vocational education as a political response of governments attempting to meet the social demand of democratising education but also

trying to control the proportion continuing to further and higher education along academic lines. Bacchus (1986) observes that attempts to vocationalise school curricula have a strong political motivation. He suggests that vocational education was used by, "...the colonisers and later, the indigenous leaders, ... as a mechanism of social control... to 'cool off' or lower the occupational aspirations of youngsters... to a more 'realistic' level" (p. 9). These views are discussed in more detail in Chapter 4 and are further explored empirically in chapter 6 in relation to the imperatives which motivated the introduction of the ZNCC and NFC pilot schemes in Zimbabwe.

It is contended in the current study that the political context of vocationalisation in post-colonial countries centres on the need to transform existing social, economic and other structures in line with the new political order. Carnoy (1990) discusses the political context and its implications for education reforms in transition states like Tanzania. In discussing its education policies, it is necessary to take into account the fact that Zimbabwe set to transform its inherited colonial economy along more egalitarian lines. From this view, vocational education is seen as a way to include into the economic activities, people who have been excluded on the pretext that they do not possess the relevant skills.

3.7.3 Pedagogical arguments

Pedagogical arguments have received the least amount of attention in the vocationalisation debate. Proponents of this perspective argue that vocational education should be justified in its own right as valuable for personal development of individuals, and not merely for its utilitarian labour market potential. It is considered as part of a

'well-balanced' education that inculcates in pupils a combination of manipulative and cognitive skills, thereby fostering a greater freedom of choice of different vocations and a sense of 'well-being'.

Critics however, dismiss these claims as mere rhetoric suggesting that schools should instead give more emphasis on a core of academic subjects such as English, Mathematics and Science (World Bank, 1992). They disapprove the addition of more subjects to school curricula when attention should be on improving standards in academic subjects, which they argue can be taught in a practical way to make them more relevant to everyday life and work situations. The pedagogical argument is challenged by educational economists who argue that vocational education is too costly to be provided without expecting financial returns from it.

3.8 Conclusions and main issues pursued in the current study

The literature survey in the current chapter examines the major issues surrounding the provision of school-based vocational education from an international perspective. The survey shows how persistent attempts to vocationalise school curricula in both developed and developing countries have come under increasing criticism internationally (Lillis and Hogan, 1983; Psacharopoulos and Loxley, 1985; and Lauglo and Lillis, eds., 1988). There is a growing consensus that vocationalisation of school curricula does not meet its intended goals such as promoting economic development and solving school leaver unemployment. Vocationalisation of school curricula has been mainly criticised on economic grounds although educational sociologists have attacked it on egalitarian grounds as discussed in the next chapter. Pedagogical claims have received the least

attention in the vocationalisation debate. The main arguments emerging from this discourse are summarised below:

1. The higher costs of providing vocational education are not compensated for by high returns.
2. Vocational education does not lead to more employment prospects than academic.
3. Pupils from vocational streams earn less than those from academic.
4. Pupils and parents reject vocational education and prefer academic which they perceive to lead to more labour market opportunities and financial rewards.
5. Vocational education does not reduce pupils' desire to proceed to higher education.
6. Vocational education does not orient pupils towards manual occupations.
7. Schools lack the necessary equipment, resources and suitably qualified and experienced teachers to provide skills that meet the requirements of industry.

The main concern of the current study is the common conclusion that, based on evidence supporting these propositions and therefore Foster's 'vocational school fallacy', schools should concentrate more on academic subjects and leave the provision of vocational skills to be done at the workplace (Lillis and Hogan, 1983; Psacharopoulos and Loxley, 1985; Lauglo and Lillis, eds., 1988; and World Bank, 1991 and 1992). The term 'vocational fallacy' is adapted in the current study to refer to such views advocating 'academicising' rather than 'vocationalising' school curricula. The criticisms against school-based vocational education have been supported by empirical evidence showing negative outcomes of vocational programmes internationally. However, it is the contention of the current study that such outcomes depend on the intended goals of vocational education in particular contexts. The 'vocational fallacy' does not seem to take into account the different socioeconomic and political situations influencing such educational provision. The perceptions and goals of vocational education differ in

relation to different contexts and the vocational fallacy cannot therefore be concluded indiscriminately. As Bacchus (in Lauglo and Lillis, eds., 1988) points out:

...it is not enough to say that vocationalizing the curriculum does not work - we need to go beyond this and see whether there are other variables which are operating within the particular socio-economic context.... (p. 39)

In examining the vocational fallacy in relation to Zimbabwe, the fieldwork investigation of the current study focuses on the imperatives influencing the current vocationalisation policy, its intended goals and how it is perceived at school level. Chapter 6 investigates the considerations underlying the 1986 Education Plan in which the current vocationalisation policy was formulated and lead to the successive introduction of the ZNCC and NFC pilot schemes. It examines the intended goals and the underlying assumptions of the current vocationalisation policy. Chapter 7 examines vocational provision at implementation and school levels. It focuses on pupils' background characteristics, aspirations and perceptions in relation to the goals of the NFC pilot scheme, the vocational fallacy and the theoretical arguments discussed in chapter 4. It also investigates the qualifications and experience of teachers and education officers as well as their perceptions in relation to the current vocationalisation policy in Zimbabwe.

It is the contention of this study that while the outcomes of vocational education can be verified empirically, the socioeconomic and political factors influencing them are not readily apparent from such evidence. The next chapter examines these factors from the economic and sociological perspectives which have been implicit in the vocationalisation debate.

Chapter 4: Theoretical issues underlying vocationalisation of secondary education

4.1 Introduction

Focusing on recent attempts to vocationalise secondary education in Zimbabwe, the current study examines the issues surrounding the 'vocational school fallacy' and the ensuing 'vocationalisation debate'. This chapter examines the theoretical assumptions underlying the provision of school-based vocational education and the arguments challenging such policies. It was concluded from the literature review in chapter 3 that although the 'vocational fallacy' was getting increasing support internationally, it did not take into account the socioeconomic and political factors underlying vocational provision. It is these factors that are explored theoretically in the current chapter in examining educational provision generally and the discourse concerning vocationalisation of secondary education. The discussion takes an international perspective although specific illustrations are drawn from experiences in Zimbabwe.

As pointed out in the preceding chapter, Foster's (1965a) analysis of education and social change in Ghana has become the '*locus classicus*' of the debate regarding the provision of school-based vocational education in developing countries. Encapsulated in the widely-quoted article, "The Vocational School Fallacy in Development Planning" (Foster, 1965b), his diagnosis of educational provision in the African context has been widely accepted and adopted by policy making institutions like the World Bank and the International Labour Organisation as well as by academics and educational planners (McPherson, 1982). Studies commissioned by the donor agencies, particularly the World

Bank, have supported the view that vocationalisation of school curricula is a 'fallacy', but their arguments are mainly based on economic considerations. While development and donor agencies have shifted their support from vocational to academic education, governments in developing countries have largely ignored claims castigating vocational education policies. Policy-makers and some academics argue that vocational education is a viable component of school curricula. It is the controversy emerging from these conflicting views that the current study examines within the context of recent attempts to vocationalise secondary education in Zimbabwe.

The arguments from the 'vocationalisation debate' that are pursued in the current study centre around Foster's (1965b) assertion that; 'the inclusion of technical, vocational or agricultural education in school curricula will not check the movement of school leavers from rural to urban areas, reduce unemployment, or have any effect on the rate of economic development. Foster postulates that pupils' educational and career aspirations are influenced by the nature of the formal employment sector which favours academic rather than technical and vocational qualifications. He argues that pupils' aspirations are determined largely by their perception of opportunities within the formal sector of the economy rather than by the type of education they are exposed to.

Foster disputes the potency of education in stimulating economic development and effecting social changes. He sees the provision of school-based vocational education as seeking solutions through schools to problems which are not educational but rooted in broader economic, social and political structures. McPherson (1982) acknowledges that the significance of Foster's proposition is that it highlights the limits of curriculum

engineering as a lever of social change and re-emphasises the extent to which what schools can achieve must depend on the social context in which they operate.

As indicated in the literature review in chapter 3, Foster's arguments have been reiterated in several other studies but various aspects have also been challenged. Besides the controversy arising from the 'vocational school fallacy' in Africa, Foster's 'fallacy' was challenged in responses to his article, "Dilemmas of Educational Development: What we might learn from the past" (Carnoy, 1975; Devon, 1975; La Belle, 1975; Petty, 1975; and Weeks, 1978). One of the major criticisms levelled against Foster's views on school-based vocational education is the lack of a theoretical basis for his arguments. Commenting on the 'Vocational School Fallacy' in relation to Papua New Guinea, Petty (1975) asserts that Foster's approach is fragmented, tending to justify each separate recommendation:

... in terms of a plausible rationale, often unrelated to other aspects of the analysis or any coherent theory of development.

Foster's recommendations are based on African experience but, without theory, he cannot show that Africa provides an appropriate model. (p. 420)

In response to these criticisms about the lack of a theory, Foster (1975) argues:

... there is not and cannot be a theory of social change and development in the way that they [critics challenging lack of a theoretical basis in his arguments] would like to have it. ...economists ...have to all intents and purposes abandoned the idea of a "general theory" of development, and I sincerely hope that sociologists can be persuaded to do the same. (p. 426)

These arguments arising from the meaning of the term 'theory' are typical of the

controversy that is manifest in social science research. Foster and the critics in this argument all seem to perceive 'theory' from the natural science view that is held by positivists. Phillips (1987) discusses the controversy surrounding the different paradigms in social science research. While condemning the use of 'theories' in social sciences, Foster (1975) goes on to suggest that:

...sociologists should instead begin to utilise ... the concept of *ceteris paribus* which constitutes one of the most powerful explanatory tools in the social sciences. (p. 426)

He is therefore accepting the need for a framework that enables analysis to take place in a coherent manner. Despite the differences in what the term theory means, it seems to be generally agreed that it is necessary to establish a contextual or theoretical framework to enable a coherent analysis of educational policies. For instance, educational provision cannot be divorced from its historical and contemporary social, political and economic contexts. However, the interpretation of such contexts depends on one's perspective of the world social, economic and political systems. The subjectivity can nevertheless be minimised by establishing a contextual or theoretical framework within which interpretations and conclusions can be drawn. Such a framework also helps to illuminate factors that may not be revealed through empirical investigations yet might have a significant influence on educational provision.

It is contended in the current study that the 'vocationalisation debate' has tended to generate and pursue hypotheses independent of each other without differentiating between causes and effects. Without a clear analysis of the broader factors underlying

educational provision, the central question why vocational education programmes fail to meet their intended goals remains obscured. Studies tend to focus on proving how vocational education has not met labour market outcomes and social benefits as anticipated by policy-makers without explaining why this is the case. It is argued in the present study that it is insufficient to show that vocational objectives are not being achieved without investigating the reasons for such failure. The socioeconomic and political factors that seem to influence the labour market outcomes of vocational graduates have not been investigated in relation to their contexts. It is insufficient to point out that the formal sector of the economy is the main cause of the dysfunctions besetting vocational education without specifying what it is in the formal sector that makes vocational education ineffective.

The common criticisms levelled against school-based vocational education can be summarised as follows:

- the mismatch between school-based vocational education and the employment sector;
- the inability of schools to provide skills that are in line with the requirements of industry;
- the imbalance between the economic benefits of vocational education in relation to its costs;
- the alleged tendency of vocational graduates to follow careers outside their lines of specialisation and the fact that employers seem to prefer academic rather than vocational graduates;

While empirical evidence seem to confirm these claims, such information is of limited importance to policy-makers since it does not specify why this is the case and provides

no viable alternative solutions. The suggestion to stop vocationalising school-curricula on the basis of such empirical evidence seems to presuppose that the failure of vocational education is intrinsic in vocational education itself. However, this does not seem to be the case and it is therefore necessary to examine the socioeconomic and political factors influencing vocationalisation programmes.

The purpose of the current chapter is to explore the socioeconomic and political issues underlying vocationalisation of school curricula and the controversy surrounding it. The perspectives discussed here have featured in educational debates generally, but specific reference will be made to their implications for vocational education. This is in line with the premise of the current study that vocational education is best understood in relation to educational provision generally and not in isolation. The analysis includes factors beyond the immediate bounds of the school such as the economy and politics and other external forces that influence educational policy and provision. This is intended to help explore the theoretical and contextual factors of vocationalisation policies and clarify further the issues addressed in the study.

4.2 The need for a theoretical framework

Theory-building is usually regarded as the main purpose of research. Scientific theories help explain educational phenomena and encompass prediction, description and control or improvement, which are at the core of educational research (Borg and Meredith, 1989). The term 'theory' is however defined variously and researchers tend to define it in relation to their avowed paradigms. Controversy surrounds what constitutes a theory, just as there are differences regarding what is 'valid' scientific knowledge among those

inclined to different paradigms such as positivism, hermeneutics and critical theory.

Borg and Meredith (1989, p. 25) give their working definition of 'theory' as, "... a system for explaining a set of phenomena by specifying constructs and the laws that relate these constraints to each other." Blalock and Blalock (1982, p.11) define a theory as "...an explanation of the relationships and underlying principles that appear to characterise the particular phenomenon the researcher selects to study." Both definitions depict 'theory' as 'a set of common constructs that describes or explains a given phenomenon'. It is within this context that the term 'theory' is used in this study.

In spite of the scientific and semantic differences of opinion regarding what a theory is, it remains imperative to define a conceptual framework within which to investigate educational issues. The lack of a coherent theoretical or conceptual framework for analysing vocationalisation of secondary education has led to different assumptions being used for its investigation. Such assumptions arise from the differences between individuals in aspects such as; material interests, values, and ideological and political viewpoints. A common framework is necessary if methods of investigation and the findings derived, are to lead to any comparable conclusions to guide policy and practice. Harris (1982, p. 19) endorses Mann's observation that, "At the core of the methodological difficulties of any discipline lies the question about the conceptual framework within which to discuss its subject-matter."

Researchers have tended to investigate educational issues such as vocationalisation, from theoretical frameworks and hypotheses that are based on different sets of assumptions.

Educational sociologists and economists, for instance, continue to speak past each other even though they might be examining similar situations in education. Differences are apparent in the assumptions underlying the following aspects: arguments surrounding the 'vocational school fallacy' (Foster, 1965); research based on the human capital theory (Psacharopoulos and Loxley 1985); sociological arguments such as those by functionalists (Durkheim) or educational reproduction theorists (Bowles and Gintis, 1976).

Economists, who are the main proponents of the human capital theory, tend to regard the purpose of education as that of meeting the requirements of the economy. Educational sociologists on the other hand, are concerned with the possible effects of the different types of schooling on the social status and mobility of pupils from different socioeconomic backgrounds. Unlike human capital theorists, sociologists regard the economy as there to satisfy human needs and not as an end in itself. These different viewpoints held by economists and sociologists lead to different sets of questions when assessing whether or not an education system or programme is successful.

Educational economists are mainly concerned with 'profitability' or 'rates of return'. Accordingly, they invoke human capital models in their analyses and arguments. Sociologists, on the other hand, are more concerned with human condition and relationships. They postulate for instance that education in capitalist systems reproduces stratified social structures to suit the social relations in production. Evidence emanating from studies based on human capital and those based on sociological perspectives therefore remains largely irreconcilable.

Further divisions emerge even among educational sociologists. Those following a radical Marxist tradition, such as Bowles and Gintis, Carnoy, Apple and Althusser, mainly work within reproduction theories. They believe that changes in society can be explained through the structure and forces of the economic system. Functionalists, such as Durkheim and Parsons, regard the main functions of education as being 'socialisation' and 'selection' of pupils into the economic system and the adult world generally. Their main concern is the contribution that education makes in meeting the needs of society. Some educational sociologists are more interested in cultural processes (Bernstein) while others focus on the socioeconomic aspects of schooling. Weberians, such as Randall Collins, suggest that educational provision is best understood by considering the conflicts that are inherent in society and the forces exerted by the socioeconomic system.

4.3 The Human Capital Theory (HCT) and its influence on vocationalisation of secondary education

The HCT was propounded by educational economists whose interest was the seeming relationship between education and economic development. Its concepts can be traced back to classical economists like Adam Smith (1776) who likened expenditure on educating an individual to investment in a machine or other forms of physical capital, (Woodhall, 1987). However it was not until the 1960s that the concepts of 'human capital' were tied together into a theory (Blaug, 1987; Woodhall, 1987). As Little (1992, p.2) observes, "...it was not until the late 1950s and early 1960s that economists sought to explain a residual in the analysis of economic growth in terms of human capital." Its most acknowledged founders are economists such as Denison (1962); Becker (1964); and Schultz (1961). Schultz and Becker were the main protagonists in pronouncing HCT

as it is known today.

Central to the theory is the notion that people invest in themselves through education, training and various other ways in order to enhance their future earning prospects (Blaug, 1987; Psacharopoulos, 1987; and Woodhall, 1987). The notion of investment in human capital is based on the assumption that formal education increases the productivity of individuals. Human capital theorists suggest that schooling creates and develops both the cognitive and non-cognitive capacities of pupils. They believe that particular levels of education improve the performance of pupils at particular levels of employment (Little, 1986). Expenditure on education is therefore regarded as an investment, not a consumption as generally believed by classical economists. Blaug (1987) observes that economists had previously viewed the demand for education as "...a demand for a consumption good, and as such depended on given 'tastes', family incomes and the 'price' of schooling..." (p.102).

However, Schultz (1961) suggested that investment in 'human capital' increased individual productivity and lay the technical base for the type of labour force necessary for economic growth. This implied that people with more education were more productive and therefore earned more. Education from this perspective led to higher private and social rates of return, thereby making it worthwhile as an investment both to individuals and to governments.

The belief in human capital explains why parents and pupils continue to believe that education leads to better employment prospects. They 'invest' in education (private

expenditure) and incur direct costs such as fees and other expenses associated with schooling, and 'direct opportunity costs' or 'foregone earnings' (what an individual might have received by engaging in other activities instead of going to school). Private rates of return refer to benefits that accrue to individual pupils as a result of their having gone to school. An education that enables a pupil to earn higher than a colleague with similar education and incurred equivalent costs for the education, is said to have a higher rate of return. Parents and pupils are influenced by their perceptions of labour market opportunities when they show a preference for particular schools or subjects.

To governments, expenditure in education includes all capital and recurrent costs that are incurred in the provision of educational facilities. In return, governments anticipate economic growth through the higher productivity that they believe an educated workforce brings about. The motivation of national governments is both economical and political. By responding to people's demands for schooling, governments are not only making a political response, but also hope to boost their economies.

Views advocating investment in human capital became particularly prevalent during the 1960s after the pronouncement of the HCT. There was a keen interest among aid agencies to implement the concept of human capital globally. It was believed the reason why Third World countries were poor was because they lacked "the knowledge and skills required to take on and use efficiently the superior techniques of production" (Karabel and Halsey, 1977, p.15). During this same period, the 'modernisation paradigm' was influential in attempts to explain development and underdevelopment. Economic development of Third World countries was perceived as their ability to

achieve the level of industrialisation which developed countries had attained, along capitalist lines (Hettne, 1991).

Expansion in educational provision was seen by education planners, politicians multi- and bi-lateral development and aid agencies as necessary for economic growth. Vocational education was particularly emphasised during the 1960s and 1970s, as reflected by World Bank lending policy (Middleton and Demsky, 1989). Developing countries were urged to promote vocational education. Development and aid agencies believed that the availability of skilled manpower would lead to industrialisation and therefore economic growth in these countries.

International aid organisations such as the World Bank and the Ford Foundation gave strong support to the dissemination of the human capital theory (Karabel and Halsey, 1977). The United Nations publications at the time regarded one of the chief educational priorities in economically developing countries as "... the creation of a fully integrated system of agricultural education within the general framework of technical and vocational education" (Foster, 1977, p. 356).

Human capital views supporting the provision of school-based vocational education are still prevalent, particularly in developing countries. However, research based on the concept of investment in 'human capital' has increasingly disputed the viability of vocationalising secondary education (e.g. Psacharopoulos and Loxley, 1985; Lauglo and Lillis, 1988). Also, research has not ascertained what levels or types of education yield optimum benefits, both to individuals (private returns) and the country (social returns).

While unemployment is on the increase, developing countries face acute shortages of skilled manpower. Because of its seeming relevance to the world of work, vocational education remains attractive to governments. It is contended in the current study that in post-colonial developing countries where skilled personnel are in high demand in the productive sectors of the economy vocational education leads to lucrative labour market opportunities. Vocational education is therefore not only attractive to governments but to parents and pupils, contrary to views attributing the failure of vocational programmes to the general dislike of such education. Empirical evidence concerning the views of pupils towards vocational education in Zimbabwe is examined in Chapter 7 of the current study.

Investment in education generally and vocational education in particular, has not met the expectations of most individuals and governments. As a result, critics have come to challenge the basic assumptions of the HCT. Its explanation of the private demand for education and rate-of-return calculations have been questioned. Blaug (1987) argues that the HCT explains the supply side of education and not the patterns of educational finance or public ownership of educational institutions. It is argued in the current study that the notions of human capital portrayed in literature do not take into account the socioeconomic and political factors which influence the economic benefits^{of} education. Views suggesting that education is not an investment in human capital are mainly based on labour market outcomes and do not consider the dysfunctions in the economic system. For instance while human capital views were prevalent in development thinking during the 1960s, colonial administrators restricted educational provision for the majority indigenous populations. Employment opportunities for the few black people who

managed to go through the education system were also limited. It could be concluded therefore that because the labour market outcomes were unsatisfactory, colonial education was not an investment in human capital. However, this does not explain the fact that it is not because education could not lead to employment, but because of the restricted opportunities in the colonial economic systems. The failure of black pupils to get jobs was therefore an intended outcome of colonial education policies.

In both developing and developed countries, demands for education and national education budgets remain relatively high. The rewards of education, though limited to small proportions of people, are nevertheless strong enough to entice the expectations of the majority who remain hopeful. Education has come to be accepted by most people as a gamble with heavy odds but worth taking. The notion of education as an investment in 'human capital' remains controversial without losing its appeal.

4.3.1 Problems with the HCT

By the early 1970s it was becoming clear that the commonly held assumptions of the HCT needed further investigation. Increased investment in education had not resulted in economic growth as anticipated. Also, studies attempting to ascertain private rates of return by levels of education, showed considerable variance. Private rates of return tended to decline with additional years of schooling (Blaug, 1987). It became increasingly clear that other factors such as innate ability, socioeconomic background, type of school attended, and the curriculum followed and labour market practices also affected earnings of individuals. Colonial experiences in Africa and elsewhere also demonstrated that the question of who gets educated or benefits from it in economic

terms, is largely political. Persistently depressed economic situations in most countries have accentuated unemployment generally, but the question of who suffers most in such situations remains both economic and political.

Nevertheless, as Woodhall (1987, p.22) points out, empirical evidence confirms that expenditure on education does represent investment in human capital and that it is a profitable investment, both to the individual and for society. The Screening Hypothesis counters this claim by arguing that the higher earnings received by educated workers is attributable to their superior innate ability. From this perspective, schooling only selects pupils according to their natural ability and does nothing to change their individual performance. It is argued that individuals do not earn more because of the additional years of schooling they received, but in respect of their personal attributes that are valued by employers. Schooling is therefore a 'screening' device to sort pupils with inborn ability and other personal qualities such as, obedience, positive attitude, motivation, punctuality and discipline (Blaug, 1987; Woodhall, 1987).

Research has shown that these attributes are also developed through schooling, thus further strengthening the 'human capital' argument. As Little (1986) points out, the screening theory claims "...that the school acts as a filter, without answering the more fundamental question of whether the filter is simultaneously developing or investing in the person or simply selecting an already developed person." (p. 17) It appears therefore that both the human capital and screening theories are partly true about the effect of schooling. Blaug (1987) suggests that the human capital theory and screening hypothesis are complimentary rather than contradictory. While the human capital focuses on the

supply side of the labour market, the screening hypothesis concentrates on the demand side.

Functionalists seem to agree with the basic assumptions of both the screening hypothesis and human capital theory. Arguing from a sociological view, discussed in more detail in section 4.4, they believe that schooling plays the role of 'selection' and 'socialisation' of pupils for the economic adult world. The inculcation of academic, technical and social attributes could be regarded as part of the socialisation of pupils into the adult world. Certification provides a means of identifying and selecting pupils for particular roles. What remains controversial is the question of which attributes from schooling lead to better employment opportunities. It is also questioned whether education should be structured mainly to meet the requirements of industry, or those of school leavers.

Governments expect schools to help prepare the necessary manpower for economic development by equipping school leavers with skills that are relevant to the world of work. The proportion of school leavers that actually get employed is left to the demands of the economic sector. Parents and pupils are more concerned with whether or not schooling does lead to employment opportunities. Although most pupils get access to education, only a few actually get jobs. There being no other viable option to economic survival, the competition for jobs through schooling only gets keener. The expectations of governments, employers, parents and pupils all confirm a belief in schooling as an investment in human capital. However, due to several factors, the notion of 'schooling for employment' has increasingly become an elusive goal in both developed and developing countries.

In developing countries, colonial capitalist production and economic systems never emphasised mass participation. Only a minute proportion of the indigenous population was absorbed into the formal employment sector. The education systems were structured to prepare a few school leavers to join the economic sector while excluding the majority. Whereas the problem was and continues to be mass unemployment in developing countries, in developed countries (before the 1970s) the problem was that people had access to either 'blue-collar' or 'white-collar' occupations, depending on their socioeconomic backgrounds. The concern in developed countries was that of what type of education led to the lowly regarded 'blue-collar' jobs and what education led to the lucrative and prestigious 'white-collar' jobs. Today, however, mass unemployment is a common feature of both developed and developing capitalist economies. The proportion of those entering the employment sector is constantly shrinking due to new capital-rather than labour-intensive systems of production, automation, and continually declining economies globally. The formal employment sectors in post-colonial developing countries only absorb a negligible proportion of school leavers even during periods of economic boom.

School leaver unemployment continues to be tackled as though it was caused by the school and not as a political or economic problem. However, problems associated with manpower forecasting have led to the conclusion that schools are incapable of equipping pupils with relevant employment skills and should therefore only concentrate on their traditional role of providing numeracy and literacy skills. It is argued that in such a situation, vocational training is best left to the employers since they know the specific skills they want and, unlike schools, have the necessary infrastructure to do so (Lauglo

and Lillis, 1988; Psacharopoulos and Loxley, 1985).

Such arguments fail to acknowledge that a strategy to let employers determine educational requirements does not resolve the exclusive (low-participation) nature of the capitalist economic system. Also, in most developing countries, the formal employment sector has such a limited capacity that the majority of school-leavers would never get the opportunity to be trained. The suggestion does not take into account the possibility of self-employment and the inability of small or emerging enterprises to train, due to restricted budgets and infrastructures. It is this focusing on economic considerations that has sparked the interest of educational sociologists, discussed in section 4.4 of the current chapter.

Research evidence has not confirmed the belief that education makes people more productive and has not shown how education contributes to economic development (Blaug, 1987). Critics such as Bowles and Gintis (1976) contend that education does not really increase the productive capacities of individuals, but schools only serve as a mechanism for maintaining social class differences. The issue becomes even more problematic when attempts are made to ascertain which types of education or what it is in education that makes people more productive. However, to suggest that formal education has no influence on economic development is clearly untenable. Countries whose economies are advanced seem to have well developed education systems as well. Economic and educational developments have always been inseparable even though the question of causality has never been resolved. The historical circumstances behind economically developed and developing countries appears to give a strong case for the

contribution of education. The lack of empirical evidence to confirm the correspondence between education and economic development cannot be taken to suggest that such a relationship does not exist. Quite often, research evidence only comes to confirm phenomena or practices which are already evident in various forms.

The tendency of the human capital theorists to view the labour market as having perfect and fair competition has been disputed. This ignores the existence of various other forces that influence decisions about recruitment and earnings on the labour market. Akesbi (1991) argues that worker characteristics and particularly educational qualifications are not sufficient to explain recruitment practices and wage structures. According to Karabel and Halsey (1977), the degree of inequality of wages prevailing at any given historical moment is in part a result of struggles between social classes over the distribution of the national income. The human capital theory does not explain the politics of recruitment practices and reward structures in the labour market.

The Labour Market Segmentation Theory suggests that earnings are a function of the structuring of the labour market into primary and secondary sectors. It is this dichotomous nature of the labour market that determines earnings, not schooling. However, it is suggested in the current study that in most developing countries, the central problem is not even the disparities in the earnings of those in employment, but how to make school leavers earn anything at all. In Zimbabwe, the majority of pupils leave school every year with no employment prospects at all. Such pupils do not seem to care what type of jobs they get. School leavers actually seem to be more realistic and tolerant of the employment situation than their parents. It is now common to find pupils

leaving school with 'O' level certificates accepting jobs that parents consider menial for this level of education.

4.3.2 Main arguments against the human capital theory - an overview

Critics of the human capital theory argue that education does not increase the productive capacity of workers but simply acts as a "screening device" which enables employers to identify individuals with higher innate ability or personal characteristics which make them productive. They believe that opportunity costs cannot be ascertained accurately enough to justify the use of input:output calculations in determining which level or type of education yields the best rate of return. It is contended that the earnings of educated workers do not provide an adequate measure of the economic benefits of education. Most empirical work in human capital lacks measures of native ability at an early (preschool) age, and the measures of family background that are invoked rarely go beyond father's or mother's education, occupation and place of residence. What is conspicuously lacking are reliable measures of family income and wealth (Blaug, 1987, p. 116). These measures are problematic to ascertain in the peasant subsistence sector of rural Africa where wealth manifests itself in forms not easily convertible to monetary terms.

What emerges from these arguments and the counter-arguments is the fact that the HCT is not sufficient to explain educational provision. Its overemphasis on economic considerations leaves out sociopolitical issues (discussed later in this chapter) which help to clarify further the intricacies of educational policy and provision on the one hand, and the demand for education on the other. The 'rates of return' calculations

(Psacharopoulos, 1973) on which HCT conclusions are based are disputed and generally disregarded by politicians and educational planners (Woodhall, 1987). Evidence emerging from the sociology of education, (particularly through theories on 'social reproduction' in education), has made further dents on the HCT. Nevertheless, the belief in human capital continues to prevail, even though no clear explanation has been offered yet to explain the correspondence between education and economic development.

Brown and Lauder (1992) provide a contemporary version of human capital in which they suggest restructuring of capitalist modes of production by emphasising mass participation. Their model attempts to take into consideration some of the sociological aspects that have been ignored by human capital theorists. Before discussing this in more detail, it is necessary to examine some of the major sociological arguments that have had a major influence on educational policies and provision and which seem to influence contemporary human capital views.

4.4 Sociological Arguments

The mounting discontent with economic approaches generally, and the human capital theory in particular, have sparked a keen interest in sociological explanations. Radical educational theorists have examined educational provision, particularly in Western capitalist economies, through what they believe to be the social and cultural reproduction role of schooling (Apple, 1982; Bowles and Gintis, 1976; Carnoy, 1972; Bernstein, 1975; and Bourdieu, 1977).

Despite important contributions by classical sociologists of the nineteenth and early

twentieth centuries, "... it was not until the 1950s and 1960s that the sociology of education emerged as a distinct area of inquiry" (Blackledge and Hunt, 1985, p. 2). Since then, various approaches have gained prominence in social analyses, only to be challenged by alternative ones purporting to provide clearer and fuller explanations. Generally however, these approaches have tended to remain within the main competing classical sociological perspectives, especially the following:

- 1) the functionalist or Durkheimian tradition;
- 2) the Marxist approaches; and
- 3) the interpretive approaches (Weberian).

Blackledge and Hunt (1985, p. 2) observe that functionalism had major empirical and logical difficulties, and was felt to be politically conservative. Within mainstream sociology, the social action theory and phenomenology were developed in response to these criticisms. In education, this led to the adoption of two forms of the interpretive approach, namely:

- 1) a focus on 'micro' social processes in the classroom and the school;
- 2) the 'new' sociology of education, whose main concern was the analysis of knowledge as a social construct.

Marxist writers have either regarded education as assisting the process of 'reproduction' and therefore maintaining capitalist 'relations of production' or they have regarded education as a 'site of resistance' to the demands of the capitalists. These approaches have been challenged by Pluralists and Weberians who argue that Marxists have

overemphasised the role of the economy to the detriment of other factors. They have been particularly challenged for ignoring contestations to these 'macro' forces preferring instead to regard human beings as little more than products of socialisation whose motivations and fate are wholly shaped by economic forces.

Blackledge and Hunt (1985, p 3) observe that the recognition of the limitations of ethnography, and the re-emergence of Marxism, has produced a renewed concern with 'micro' social processes. The central notion in these approaches is that education is best understood by examining everyday interactions and perceptions of the social actors. Such analyses have been disputed for being content with describing the status quo without the significance for wider society. Also, micro approaches do not seem to take cognisance of the broader socioeconomic and political forces that influence human interactions and perceptions.

While taking micro approaches into account, the attention of neo-Marxists remains focused on the relationship of education to the economy and the political order. However, their interpretation of the relationship differs from that found in the functionalist theory. In spite of their other differences, both Marxists and Functionalists seem to agree that education is best understood by locating it within its 'macro' context. Illustrating this observation, Blackledge and Hunt (1985) point out how everyday activities of teachers, pupils and administrators are seen to be dominated by factors such as society (Durkheim), the needs of society (Functionalists) the economy, class system or ideology (Marxists).

It seems that both 'micro' and 'macro' perspectives focus on different aspects of social analyses without necessarily contradicting each other. Acknowledging the problems with the use of either of them individually, Weberians try to link *both* the *micro* and *macro* approaches to education, arguing that school and classroom activities must be related to wider social processes.

4.4.1 Educational Reproduction Theories (ERT) and the Vocationalisation Debate

These theories are based on the premise that a person's occupational status is predetermined by social class. Schooling merely plays the function of selecting and socialising pupils into their slots by teaching attitudes, discipline and a work ethic that is compatible with their specific occupational roles and post-school life. Different writers have emphasised different ways in which they believe schools do this. Bowles and Gintis (1979) stress the overriding influence of capitalist economic practices; Bernstein (1973), Bourdieu (1977), and Willis (1977) emphasise 'cultural capital'; while Aronowitz and Giroux (1985) Carnoy and Samoff (1990) and Apple (1982) refer to the state, economy and civil society relationship.

ERT emerged from the sociology of education in the early 1970s, at a time when doubts were mounting about the efficacy of investment in 'human capital'. As Worsley (1987) observes, from the mid-1970s:

...there was growing disillusionment regarding the assumptions about the correlation between exposure to schooling and subsequent income, national economic growth and productivity. (p. 168)

Cole (1988, p.7) observes how, "In the early 1970s many radical sociologists of education became seduced by the New Sociology of Education (NSE)." Unlike the HCT whose primary concern was economic development, ERT sought to explain the effect of schooling on social relations in capitalist economies. Some of their central concepts, particularly their criticism of the capitalist economic social relations, were influenced by the neo-Marxist tradition.

Three approaches came to dominate the sociology of education, during this period.

Apple (1982, p.127) identifies these as:

- (a) the structural-functionalist approach;
- (b) the new sociology of education; and
- (c) the political economy of education.

The main focus of the first approach was the technological contributions of education to the economy. The new sociology of education (NSE) concentrated on the content of schooling and how particular conceptions of reality were constructed in schools and classrooms. The stress of the 'political economy of education' was power and structure in schooling (Apple, 1982, p.128).

Research in the sociology of education adopted a more radical stance, and a keen interest in examining the role played by the education system in reproducing capitalist social relations. ERT regarded the requirements of society and equity as the main consideration in assessing educational provision. The plausibility of an education programme was seen in terms of its ability to allow economic and social mobility and

minimise social class disparities. Vocationalisation of secondary education in capitalist economies was regarded as one of the ploys used to keep pupils from lower socioeconomic backgrounds out of contention for viable employment.

Increased investment in educational provision during the 1960s, and the attainment of political independence in most African countries led to mass enrolments and new attempts to vocationalise secondary education. In European countries, this started after World War II. A larger proportion of pupils from lower socioeconomic families now attended secondary school, yet the economic and social disparities that existed prior to mass education persisted. Disparities between social classes had always been thought to be due to the fact that education was only available to a privileged few. However, when these continued to exist even after expanding facilities for pupils from lower socioeconomic backgrounds, educational sociologists invoked radical approaches to analyse educational provision.

They examined the prevailing notions of 'egalitarianism' and 'meritocracy' more critically. Worsley (1987, p.167) states the two main issues that came to dominate research in the sociology of education at this stage as:

- (a) The origin and persistence of educational inequalities, and the relation between education and the economy;
- (b) The question as to whether formal education (or schooling) is really educational at all, except for a few.

Young and Whitty (1977) observe in Britain, that:

...the most striking feature of the world of education in the 1970s, ...[was] the sudden disappearance of the overwhelming assumption that schooling is a 'good thing'. (p. 1)

Unlike the human capital theorists whose prime concern seemed to be 'rates of return' or 'profitability', educational sociologists were interested in equity and social mobility. They questioned why expansion in education had not brought about equality of opportunity. They argued that this was because schooling in capitalist economies was being used, mainly to reproduce the existing social and economic relations (Bowles and Gintis, 1976; Karabel and Halsey, 1977; and Apple, 1982).

Apple (1982, p.1) identifies four interrelated questions around which the sociological debate centred, regarding the role of schooling in advanced capitalist societies as follows:

1. Do schools primarily reproduce the social division of labour or are they avenues for addressing the existing inequality of power and knowledge in our society?
2. Are schools strongly determined by ideological, economic, and cultural forces outside of them or do they have a significant degree of autonomy?
3. Do theories of economic reproduction adequately respond to the cultural and ideological roles played by education?
4. What actually happens in the school... that may provide answers to these questions?

Young (in Worsley, 1987) observes that the main themes that emerged from the sociological research are, 'access and opportunity', 'curriculum and content', and 'social and cultural reproduction'. There was however general agreement that schools did act as institutions of economic, cultural and social reproduction. Disagreements were mainly

about 'how' and 'to what extent' schools succeeded in doing so, not 'whether or not' reproduction did occur. As Apple (1982) asserts, "There can be no longer any doubt that schools do seem to be institutions of economic and cultural reproduction" (p.1).

Research on educational sociology has generally focused on either economic or cultural reproduction (Apple, 1982). Economic reproduction emphasises the role of capitalist modes of production in shaping school curricula and social relations. Bowles and Gintis (1976) provide a prime example of the economic perspective through their "correspondence principle". Cultural reproduction explains how dominant groups in society influence schooling in order to maintain their hegemony (Bernstein, 1977). They do this by imposing their cultural norms and values to decide school curricula and social relationships.

4.4.2 'Correspondence' and 'reproduction' in education

As Apple (1982) rightly points out, few theories of the role of schooling in contemporary society have had such a major impact on educational argumentation as that postulated by Bowles and Gintis in *Schooling in Capitalist America*. Arguing from a Marxist perspective, they suggest that schooling reproduces the unequal social relations inherent in capitalist economies. As such, it channels pupils from lower socioeconomic families to lower level, 'blue collar' occupations, (Willies, 1977).

Bowles and Gintis, (1976) view the education system as merely mirroring the inequalities of capitalist societies and 'reproducing them'. Their critique of the [American] capitalist economy is that "...the people production process - in workplaces

and in schools - is dominated by the imperatives of profit and domination rather than by human need" (p.54). The main objective of schooling from a capitalist point of view then, is to prepare pupils for the requirements of production. Pupils own needs are secondary and therefore inconsequential in determining educational policy. Schooling attempts to gear the development of personal needs to capitalists requirements, by attuning people to social relationships similar to those of the work place (Bowles and Gintis, 1988). They claim that the schools attended by pupils from different socioeconomic backgrounds, have distinct 'socialisation patterns'. While schools for upper class pupils emphasise problem-solving, critical thinking and leadership qualities, those for working class children stress discipline and ability to follow instructions without question.

According to the 'correspondence principle', the reproduction of the social relations of production is facilitated through a structural correspondence between the social relations of the educational system and those of production. Accordingly, contradictions which arise in educational reforms are not due to educational policies as such, but result from capitalist economic practices, based on wage-labour for the majority (Worsley, 1987). In developing countries however, Worsley's 'majority' applies to the small proportion of school leavers who manage to get employment. In Zimbabwe, less than 10 per cent of school leavers enter the formal employment sector every year. Educational reproduction then, as a means of predetermining pupils' occupational destinies into either manual or white-collar jobs, does not apply to the majority of school leavers who remain unemployed. What remains true however, is the fact that education is used to select and socialise the minute proportion of school leavers who join formal sector

employment or proceed to higher education.

4.4.3 Limitations and implications of the 'correspondence principle' and 'educational reproduction'

The correspondence principle has been criticised for overemphasising the influence of capital without taking into account other factors that are believed to influence educational provision. Its tendency to disregard the 'contestations' taking place all the time as both pupils and parents exert their own demands, has been pointed out as a weakness. As Blackledge and Hunt (1985) observe, the correspondence principle gives the impression that:

...the capitalist class has had it all the way, having been able to impose upon the working class the amount and type of education that has most suited its purpose. (p. 140)

They illustrate this point by suggesting that mass education was in fact an outcome of class conflict, not of class domination. Apple (1978) argues that the 'correspondence principle':

... treats ... schools as 'black boxes'. It uses input / output measures of achievement and mobility without engaging in in-depth analyses of how these effects are created in the school. (p. 1)

The central notion of the Correspondence Principle implying that changes in the nature, quality and quantity of education are influenced by factors outside schooling has been challenged by Little (1986). She points out that this contradicts the suggestion in

Chapter 11 of 'Schooling in Capitalist America' that change can be effected through education (p. 20). The Correspondence Principle is also criticised for overemphasising the influence of the economic system without taking other factors into account, particularly culture. It fails to acknowledge the 'relative autonomy' of the education system, preferring to emphasise 'structural determinism' in which the economic sector is an unchallenged arbitrator. The 'correspondence principle' tends to overemphasise the influence of capitalist economic sectors on education policies. Brown and Lauder (1992) argue that:

...there is little evidence supporting the claim that education ever functioned as an important site of working-class socialisation into appropriate work attitudes (p. 103).

In most post-colonial developing countries, the industrial and commercial economic sectors have no direct control over schools. While governments may relinquish the administration and financing of schools to local and private authorities, they still determine and control school curricula. Schooling however, remains centred around the needs of the industrial and commercial sectors due to labour market forces. Even though there might not be any direct involvement of the industrialists in policy making, educational planners, parents and pupils still perceive the main purpose of education as preparation for employment. It is this view of education as investment in human capital that leads to a general acceptance of educational provision that is mainly oriented towards the requirements of the formal employment sector. The 'conspiracy theory' suggesting that capitalists manipulate schooling to suit their own requirements is disputable due to the relative autonomy that educational bureaucrats and schools seem

to have. In Zimbabwe, as in most developing countries, the state bureaucrats and capitalists are two distinct conflicting groups whose expectations of school leavers are largely different. While the former have political power, the latter have an almost total control of the economy.

Within the context of most developing countries, the 'correspondence principle' does not explain the conflicts that often exist between a newly independent government and the capitalist economic sector. In the case of 'transition states' (Carnoy 1990), the government attempts to replace the capitalist economic system with a more egalitarian, socialist one. Since school is one of the main institutions through which it can translate its social policies, government centralises the control of the education system. Rather than deliberately reproducing the inherited capitalist social relations, transition states attempt to create a new socioeconomic order. There is therefore a shift, especially during the first few years after attaining political independence, from that of social class reproduction to policies aimed at the accelerated advancement of the indigenous population. However, as discussed later in section 4.4.5, post-independence education, economic and political systems soon produce 'new elites' to join the former elite group.

4.4.4 Educational Transformation and Contradictions in Transition States

The arbitration role played by the 'transition state' in the provision of education, raises contradictions which are not explained in reproduction theories. In Zimbabwe, Dzvimbo (1991) observes that contradictions arise:

...between government's objective to use education to transform the inherited capitalist modes of production and the strength of an individualistic, elitist and

competitive ideology... being reproduced by the dominant capitalist mode of production. (p. 47)

The inherited 'elitist' education that is based on a 'low-participation' capitalist economic system has a dynamism of its own and conflicts with post-independence egalitarian ideals. The contradictions in Zimbabwe's education system resulted partly from the very policies that sought to remove disparities created by colonialists. Attempts by government to bring about social justice based on socialist principles of mass participation in the economic system, and the preservation of the highly developed capitalist economic system inherited at independence were in contradiction. The expectations of the majority black population could not be met without transforming the colonial economic system that was characterised by the marginalisation of the 95 per cent majority black population. Transforming the education system without prior or at least parallel changes in the economic system was largely futile. The successive failure of post-independence educational reforms such as the Education With Production and attempts to vocationalise school curricula illustrate this point. The contradictions existing between capitalists, the state, and civil society and further contradictions within each of these sub-cultures, form the basis of the current analysis. The situation in which education has become a fertile site for contradictions and conflicts is not unique to Zimbabwe. Aronowitz and Giroux (1985) argue that in the post-colonial state, or indeed any democratic state formation:

...education becomes a central terrain where power and politics operate out of a dialectical relation between individuals and groups who live out their lives within specific historical conditions and structural constraints as well as within cultural forms and ideologies that are the basis for contradictions and struggles. (p. 12)

4.4.5 Post-independence Education and Social Class Production

Collins (1977) explains the contradictions that exist in advanced capitalist economies through the 'conflict theory', in which different groups in society are in a continual struggle for wealth, power and prestige. Just before the attainment of independence in Zimbabwe, the colonial regime anticipated such a struggle and handed over the responsibility of former European schools to local communities, to enable them to protect their own interests. After the attainment of political independence there was a surge of demands to start private 'high-fee' schools by the white communities and a new black 'elite' class. It meant therefore that while the rhetoric in government policy was to democratise education and bring an end to existing disparities, by allowing the proliferation of private schools, elitist education continued to thrive. Also, by leaving the responsibility of providing schools to local communities, existing economic disparities perpetuated the unequal provision of educational facilities.

The rapid expansion of educational facilities, mainly based on the self-reliance of local communities solved the problem of democratising access to education but failed to stop unequal provision. Although most of the expansion in the provision of schools was in rural areas, facilities in the new rural day secondary schools were generally inferior to those in urban areas. The academic achievement of pupils at rural day secondary schools were and remain considerably lower in comparison with other types of schools (Riddell, 1991 and Dorsey, 1991). Since schooling was the main means of socioeconomic mobility for the majority of black people, differences in the quality of education brought about by disparities in the provision of school facilities gave rise to a new class formation. Education therefore reflected and accentuated social class 'production' rather

than 'reproduction'. The situation confirms a belief in human capital but is not explained in educational reproduction arguments. Educational reproduction seems to be more applicable to situations in developed countries like Britain, where there are distinct and established social classes. Sociological arguments based on such advanced capitalist systems therefore do not seem to explain educational provision in transition states.

International capital and politics also play a significant role and give rise to further contradictions in education policies of many developing countries. At independence in Zimbabwe, the Lancaster House Agreement had already imposed restrictions on the new government's attempts to transform the inherited capitalist economic system. Through legislation to protect the interests of the four per cent white population, it ensured that post-independence policies would not lead to radical economic restructuring and redistribution of wealth, at least for the first ten years of independence.

The government found itself in a dilemma of trying to meet the expectations of the African majority population while maintaining the inherited capitalist economic system. The lack of skilled and entrepreneurial personnel at independence made it difficult to 'indigenise' the manufacturing sector. The introduction of the World Bank economic recipe, referred to as the Economic Structural Adjustment Programme (ESAP), imposed further restrictions on government's plans to transform the colonial capitalist economy along the avowed 'socialist' principles. The 'free market' principles of ESAP and government's socialist oriented egalitarian policies were largely in contradiction.

Dzvimbo (1991, p. 47) discusses how economic constraints imposed by local and

international capital, continue to limit the ability of the transition state to transform the content and orientation of the educational system. However, it is the view of the current study that in spite of the prevailing economic and political forces exerted by both local and international capital, the government still has the autonomy to decide school curricula.

Education policies in transition states are influenced and constrained by the conflict that exists between the state, the capitalists who control the economy, and the demands of civil society. The civil society is not even a homogenous group. It divides into distinct interests groups based on race, ethnicity, economic status, political standing, religious affiliation and many other characteristics that distinguish the various sub-cultures in society. The combined influences of capital, politically dominant groups and the civil society, should all be taken into account in assessing educational provision. These include but go beyond the influences suggested in the 'correspondence principle'.

The concept of 'social class' in newly independent developing countries presents a further problem to the application of the 'correspondence principle'. Soon after independence, new socioeconomic groups start emerging from opportunities that are mainly based on educational, economic and political participation. Schooling, particularly during the first few years after the end of colonial rule provides real social and economic mobility for many people. The benefits of investing in education and the notion of 'meritocracy' are therefore more meaningful in the newly independent states.

Cheru (1987) confirms this situation for post-colonial African states generally in which

"...education was the primary qualification for access to wage-earning jobs in the first years after independence" (p. 159). In Zimbabwe this explains why the expansion of educational facilities met with such widespread support among the Africans. The exodus of skilled white personnel soon after independence and the expanded opportunities for black people (particularly within the civil service), contributes to the increased opportunities of school leavers on the job market. Also, through its policy of 'black advancement', the newly elected government removed some of the barriers that had previously militated against African school leavers on the labour market. To a large extent, the possession of certificates rather than race or 'parentage' provided employment opportunities during this period. Prior to independence, the few Africans who went to secondary school all received an education that was largely similar, until the introduction of the junior secondary (F2) schools. Even the urban / rural disparities only accounted for whether or not there were schools at all, not the type of education obtained. At independence therefore, Africans leaving school had comparable education and relatively less distinct social class differences. The colonial system had marginalised Africans generally into a racial underclass, with those in urban areas at a slight economic advantage over their rural counterparts. Even then, those in urban areas often had their families in rural areas and were interdependent. As far as the Africans were concerned, the urban / rural disparities in income distribution were therefore less pronounced than often implied in literature.

4.5 Vocationalisation and the human resource development argument

While most developed countries have surpluses of skilled and professional personnel, post-colonial developing countries inherit infrastructures that are poorly supported by an

indigenous workforce. It therefore becomes imperative for governments in developing countries to attune educational provision to the requirements of economic development, and at the same time meet post-independence expectations of society. It becomes prudent for governments to get involved in human-resource development rather than leave it to the whims of a mostly foreign-controlled capitalist economic sector. Post-independence egalitarian socioeconomic policies tend to conflict with the interests of the capitalist formal sector. Government policies aimed at including more people to participate in economic activities are unlikely to be accepted by capitalists who want to maintain their monopoly and control of the formal economic sector and maximise their economic benefits. Mass participation in formal sectors of the economy contradicts with the inherited capitalist economic system based on 'mass-accumulation' of wealth by a privileged few.

However, the active involvement of the indigenous people in the productive sectors of the economy soon after independence is hampered by their lack of skills. Since this is a direct result of colonial policies which prevented Africans from acquiring high level skills, it becomes imperative for the post-independence government to enable them to acquire these skills. Human resource development becomes particularly crucial in attempts to make the economic system benefit the majority of the population. It stands to reason that if more people are to benefit from the economy, then more people should be given the opportunity to contribute to it. Although this view seems to be realised, most developing countries continue to give low status to vocational education. They seem to follow education systems based on advanced capitalist economies in which vocational education has traditionally been accorded a low status. In such systems,

vocational education was used mainly to prepare working class children for menial manual occupations in order to maintain their social class structures. While they seem to emphasise the provision of technical and vocational education in rhetoric, in practice developing countries continue to give it a low status. In Zimbabwe, this is particularly evident in the fact that technical subjects have generally not been accepted as equivalent to academic subjects for acceptance into sixth form.

As pointed out in chapter 3, international development aid agencies have increasingly discouraged developing countries from vocationalising school curricula even though they continue to support the engagement of skilled 'expatriates' mainly from developed countries. Ironically, most of the criticisms against school-based vocational education seem to come from scholars in developed countries yet such education continues to feature in school curricula of their own countries. In England and Wales for instance, the National Curriculum stipulates the provision of design and technology for all the 5 to 16 year old children (National Commission on Education, 1993). Many scholars from developing countries have also joined in the attack of school-based vocational education. However, most of them seem to be influenced by their uncritical acceptance of literature from developed countries, their mainly academic backgrounds or they portray views which they think are acceptable by publishers. As Bacchus (in Lauglo and Lillis, 1988) points out:

...the "death sentence" on vocationalisation of the curriculum was pronounced mainly by First-World scholars with some support from their intellectual compradors and former students from the developing countries. (p. 32)

Research evidence suggests that vocational education should not be provided within

schools because it is too expensive and does not serve the purposes it is intended for. The studies are however based on human capital theory assumptions which do not seem to take full cognisance of the social and political situations in developing countries. While ERT attempt to explain educational provision within its socioeconomic as well as political context, their analyses are mainly based on experiences and situations that prevail in advanced capitalist economies. However, both the HCT and ERT provide a useful framework for examining education policies in developing countries but they need to be reinterpreted in relation to prevailing situations. It is suggested in this regard that the criticisms levelled against both the HCT and the ERT reflect the inherent contradictions of capitalist economic systems. Although largely American and Euro-centric in context, the Weberian perspective, particularly that propounded by Collins (1979) and a contemporary perspective of human capital of Brown and Lauder (1992) take into account aspects from both the HCT and ERT and therefore provide a basis for further reinterpretation.

4.6 The Conflict Theory and the Credential Society

Collins (1977 and 1979) describes educational developments in America in terms of a 'conflict theory' and the pressures exerted by the imperatives of qualifications (credentials). The conflict theory is derived from Collins's disagreement with the technical-function theory whose weakness he ascribes to the fundamental assumptions of the main functional theory itself. The functional theory, he contends, tends to justify whatever particular socioeconomic pattern exists, claiming there is a proper reason for it to be so "... but failing to state the conditions under which a particular pattern will hold rather than the other" (Karabel and Halsey, 1977, p. 124). He disagrees with the

functional perspective that the needs of society determine the behaviour of individuals within it. To him, individuals are primarily motivated by their own desire for material rewards, power and prestige.

While accepting the premise of the functional theory that technical requirements influence educational provision in particular contexts, Collins (1977) believes that a fuller explanation of the link between education and the economy is provided through a 'conflict theory' derived from Max Weber's approach. He believes though that this relationship is best explained by incorporating within the conflict theory, elements of the functional analysis, particularly those relating technical requirements to specific jobs, (Karabel and Halsey, 1977, p. 118). However, he refutes the functionalist view that industrial and commercial demand determine educational development. In his view, the rise in educational requirements for employment resulted from the power struggles and other forces embedded in the conflict theory as well as the technical requirements as implied in the technical-function theory.

Collins (1977) focuses on the process and dynamism of conflict and domination in society. He suggests that society is made up of distinct status groups whose differences in cultures and sub-cultures place them in positions of rivalry for economic status and other material gains. The cohesion of such groups is based on their common cultures in forms of; language styles, ethnicity, economic situation, power positions, geographical origin, religion, education, intellectual or aesthetic cultures. Collins suggests that the existence of such groups means that there is a continual struggle in society for wealth, power or prestige. From this perspective, social life is an arena of struggle in which

various groups try to dominate each other in attempts to gain wealth, status and power. Drawing from Max Weber's analysis of society, Blackledge and Hunt (1985, p. 323) observe that such groups are distinguished in terms of the following features:

- 1) Class: differences in property ownership or economic position;
- 2) Status: differences in cultural position such as ethnicity, religion, or education;
- 3) Party: differences in power deriving from positions held in the state or in other organisations and bureaucracies.

From this view, the function of education is to socialise pupils into specific cultures implying therefore that the provision of academic or vocational education and skills is of secondary importance. Studies in America have revealed that prominent corporations tend to regard college degrees as important in hiring potential managers not because degrees are thought to ensure technical skills, but because they indicate "motivation" and "social experience" (Karabel and Halsey, 1977, p. 128). Collins contends that in general, employers are mainly concerned with the acquisition of 'appropriate' social attributes and whether or not school leavers possess technical skills, is of lesser importance. It is argued in the current study that this seems to be the case at higher and at lower levels of employment. The middle technician range requires prior training in specific technical skills. Most management positions and unskilled ranks tend to rely more on experience and pre-training plays a less significant role.

Various groups in society try to use education to their own advantage in their struggle

for economic and status domination. Collins (1977) observes how in Western capitalist economies such struggle has been apparent throughout history, with different groups advocating different types of education to serve their own interests. Blackledge and Hunt (1985) give the following examples of such groups:

- 1) Those concerned with attaining economic rewards have sought education that emphasises training in 'practical skills';
- 2) Those in pursuit of high social status and cultural integration have tended to seek literary and aesthetic, rather than practical education.
- 3) Groups seeking political power and control in the state or large scale organisations and bureaucracies have not been concerned so much with the content of education as formal, meritocratic systems with an emphasis on advancement through the acquisition of qualifications through successive examinations. In his examples to illustrate this observation, Collins (1977) describes how education systems in early China, Japan, France, and Russia during the seventeenth to nineteenth centuries, have been organised to achieve social control.

He cites evidence suggesting that employers' demand for educational qualifications indicates their concern for acquiring respectable and well-socialised employees. Their concern for skills acquired through education is not of paramount importance. In any case, employers tend to have inconsistent and imprecise conceptions of the skill requirements of most jobs (Karabel and Halsey, 1977). Little (1988) reports the findings of a study by the University of Sussex in which out of seventy employers surveyed in Mexico, Sri Lanka and Ghana, "... not one had tried systematically to determine why a given educational qualification was required for a given job" (p. 19). Specific technical skills, Collins (1977) contends, are learned on the job, not in schools. He dismisses the functionalist theory in preference for a Weberian approach.

Collins (1977) accepts the Marxist view that sees education as a means of producing a disciplined labour force. However, he believes that:

... compulsory education was first created not for industrial, but for military and political discipline. ... states impose compulsory education on populations which are seen as threats to state control, and that those economic classes which are influential in the state will help define the nature of the 'threat'. (Blackledge and Hunt, 1985, p. 324)

Collins believes that the mass of the population has also used modern educational systems to meet their own goals, particularly economic and social mobility. The majority of the population regard education as a means of enhancing their own economic and social status and prestige. Collins describes education as a kind of 'market-place' in which individuals are in constant pursuit of their own specific goals. This seems to suggest that educational development is not mainly determined by 'macro' forces, such as the requirements of society (as held in the functionalist view) or economic prerogatives, (as Marxists tend to imply). Nevertheless, he acknowledges the influence of these broader structural forces in shaping individual choices.

Describing the contemporary American system, Collins (1979) suggests that educational qualifications are used to 'limit the supply of candidates' for 'socially and economically advantageous positions', and to monopolise such positions for the holders of educational patents'. Educational qualifications (credentials) determine occupational destinies of pupils. Those without educational credentials are excluded from socioeconomic opportunities. It is worth noting however that although most of those who gain access into the employment sector do so through credentials, most of the school leavers

possessing credentials do not gain such access. It is argued in the present study that the type of school attended and the quality of education attained are related to the socioeconomic background of pupils. In Zimbabwe, pupils from higher socioeconomic backgrounds tend to attend schools which have better facilities and more qualified teachers and are therefore more likely to perform better in public examinations (Riddell, 1988). Credentials are therefore still tied to socioeconomic background factors, further eroding any notions of meritocracy in educational provision.

Collins suggests that the rise of credentialism was not due to economic changes. The basic structure of the American economy was formed before the rise of credentialism, which arose in a period of multi-ethnic conflict. Mass schooling arose from:

...the Anglo-Protestant bourgeoisie's desire to preserve its own culture and protect its social and economic position in the face of the diversity and competition produced by successive waves of migration. (Blackledge and Hunt, 1985, p. 325)

However, the various ethnic / cultural groups also attempted to use education to serve their own interests. Collins (1979) believes it is this struggle for domination that has led to an inflation of educational qualifications in securing occupations. In the 'credential society', it is not the content of education that matters, but the level of the certificate acquired. It is the highest qualifications that enable one to enter 'monopolised' and lucrative occupations, not the type of education followed. While higher credentials provide a labour market advantage, employers in developing countries like Zimbabwe also sometimes regard job applicants as 'over-qualified'. This appears to be the case when employers fear that higher qualifications might make people expect or demand

higher salaries. Employers therefore resort to 'experience' as a criteria for recruitment. Supervisory and management positions are often filled by long-serving employees who have 'worked their way up'. Such personnel have relatively low qualifications and therefore accept lower remuneration than they would if they were more qualified. The preference of employers to train on the job or recruit less qualified but skilled and experienced personnel, seems to be based on this principle. Employers prefer to have the bargaining power over new recruits.

By suggesting that the level rather than the content of education is what employers look for, Collins seems to imply that it is only general education and not 'specialisation' that employers are interested in. However, the current study takes the premise that it is the scarcity rather than merely the level of credentials acquired that give pupils better opportunities on the labour market. In Zimbabwe for example, people graduating as teachers with university degrees often earn much less than apprentices graduating from polytechnics as journeymen or secretaries with qualifications from high-fee elite colleges. Even these 'elite' qualifications become less viable as soon as they are oversubscribed. This often places pupils in a 'wild goose chase' whereby they aspire to specific vocations which they perceive to offer attractive opportunities currently. However, even before the pupils qualify, these courses become 'too popular' to the extent that they become over oversubscribed thereby reducing the chances of pupils to be recruited. The value of credentials is subject to the labour market forces of 'supply and demand' (Collins, 1979). The main reason why credentials become important is because the jobs are in short supply.

According to Collins, credentialism exacerbated the process of social stratification, through the 'professionalisation' of occupations in various sectors. The principal beneficiaries in this situation, he believes, are the professionals and those working in bureaucracies of industry, government, education and trade unions. He describes the prevailing situation in America as a 'credential crisis', in which an increasing number of people are acquiring increasingly higher 'certificates', resulting in a general inflation of educational qualifications. He believes this is leading to widespread disillusionment in schooling, and a possible collapse of the system. It is contended in the current study that as long as economic systems continue to reinforce the belief in investment in human capital through the reward structures, schooling is unlikely to collapse. Rather, the disillusionment might lead to pressures to review the systems and democratise participation in the economy, similar to pressures which resulted in mass schooling in the United Kingdom.

Collins challenges the technical-function theory's belief that there is a significant correlation between education and economic development. He argues that even overall levels of economic development do not settle the question of causality. He illustrates this by the observation that:

The overproduction of educational personnel in countries whose level of economic development cannot absorb them suggests that the demand for education need not come directly from the economy and may run counter to economic needs. (Collins, 1979, p. 15)

The notion of 'overproduction of educational personnel' is indicative of the belief that educational development and provision should be determined by the requirements of the

economic sector. It gives education a 'reactive' rather than a 'proactive' role in economic development. If the purpose of education is regarded as enabling individual members of society to contribute towards the economy and to realise their full potential and improve their quality of life, then terms like 'overeducating' lose their meaning. It makes no sense then to argue that unemployment is caused by the overproduction of school leavers, as often stated by educational economists. The contention of the current study is that education increases educated unemployment and raises pupils' career aspirations or expectations but is not the cause of general unemployment.

On the question of the contribution of education to individual productivity, Collins argues that better educated employees are not generally more productive than others. Whether or not pupils have had vocational education at school is irrelevant to their job fate. School leavers who have formal vocational education do not generally fare better than those without it; "...graduates of vocational education programs are no less likely to be unemployed than high school dropouts" (Collins, 1979, p. 16). In his opinion, the reason why this is the case in America is that vocational high schools are meant for 'troublemakers'. Pupils from such schools are therefore not recruited by employers because of their suspected indiscipline and insubordination.

In Zimbabwe, pupils offered vocational education have generally been those of lower academic ability and are therefore likely to attain lower results in public examinations. They are offered arts and crafts subjects and not science and mathematics. As a result, they stand less chances of employment than those with science and mathematics and higher grades on their certificates. Employers therefore tend to recruit pupils from

academic streams not because of an inherent dislike of vocational qualifications, but because of the 'quality' of the certificates held. Such a situation is not resolved by stopping to offer vocational subjects in schools, as advocated in the 'fallacy' of school-based vocational education (Foster, 1965; Lauglo and Lillis, 1988; World Bank, 1990) but to offer such subjects to all ability ranges. Less able pupils could benefit if they are offered specialised craft-based courses, while more able pupils do science-based technological subjects. It is necessary however to note that the performance of pupils is also influenced by the availability of resources at school. Therefore allocating some schools to do craft courses while others are doing technology courses may lead to or perpetuate existing disparities in the provision of educational facilities. It is better for such options to be available within rather than between schools.

Rossanda et al (1977, p.652) conclude that whether there is diploma inflation or the abolition of all academic credentials, social stratification will continue to be reproduced outside the school system according to the exigencies of the market and the organisation of consent. One of the sources of contradictions existing in education systems of post-colonial transition states is the pursuance of egalitarian social policies while maintaining capitalist economic systems.

4.7 Contemporary 'human capital' views in education

Brown and Lauder (1992) provide a more current analysis of the complex and controversial relationship between education, economy and the state. They believe educational development in Britain is influenced by the dynamism arising from technological advances; 'an extension of global economic markets'; 'the social

revolutions taking place in Eastern Europe'; 'the growing economic power of the Pacific Rim and Latin America'; 'the relationship between rich and poor countries'; and an international concern for 'the environmental destruction of our planet'. (p.1) Although their analysis is from a Western European perspective, it also reflects situations in post-colonial developing countries like Zimbabwe. This is particularly so since education and economic systems in these countries are structured along Western European capitalist models.

According to Brown and Lauder (1992, p. 2) "... the future organisation of work and employment is open to political negotiation and struggle." Current trends in capitalist development tend to marginalise the majority of the workforce through:

...the establishment of a small elite 'core' of expert (usually male) workers who are indispensable, and a 'peripheral' workforce of contract or part-time labour... organised to respond to fluctuations in the supply and demand for labour. (p. 3)

Advocates of the economic view of education suggest that school curricula should only respond to the requirements of industry. They believe that schools should concentrate on imparting general academic knowledge and leave industry to provide technical and vocational training (Foster, 1965; Psacharopoulos and Loxley, 1985). This argument is supported by sociologists who are critical of the functionalist view of education. As Blackledge and Hunt (1985) note, Collins contends that beyond the provision of mass literacy, education makes little contribution to economic development. He argues that schools do not supply any specific skills but rather these are usually learned on the job. However, this seems to explain the status quo and does not answer the question of

whether schools cannot or should not provide vocational skills.

It was observed earlier that recruitment practices in industry tend to favour the promotion of a small 'elite' workforce. It means therefore that schooling that only responds to the requirements of industry will not meet the needs of the majority of pupils. Such education also fails to exploit the talent and potential of the population. It therefore does not only fail individuals, but society as a whole. Although such systems might have appeared to work in early forms of capitalist production, the changes in modes of production, globalisation of trade and an increased consciousness of the need for social justice call for new strategies. In order for post-colonial states to realise their democratic and egalitarian goals, it is imperative for their educational and economic systems to refrain from colonial 'elitist' to post-independence 'mass' oriented development strategies.

Brown and Lauder (1992, p. 3) suggest that Western economies should change from 'fordist' to more flexible models of capitalist production. Such a change entails different strategies and organisation in education and work sectors. They suggest a shift from the 'fordist' system based on 'routinised' mass production and standardised goods, to a system that is more adaptable to changing global economic demands. They advocate a:

...shift to a system based on adaptable machinery, adaptable workers, flatter hierarchies, and the breakdown of the division between mental and manual labour and learning. (p. 3)

According to Brown and Lauder (1992), individual nation states should attempt to meet

the challenges of global economic competition by reorganising their own institutions and human resources. Both capitalist and state socialist societies have always and continue to invest in education for economic progress. Brown and Lauder (1992) observe that:

...although genuine attempts to extend educational opportunities to most children were evident in the 1960s, the general contours of modern educational systems have been more decisively shaped by the relentless appetite for more efficient forms of production and control. (p. 5)

Several features illustrate the faith in the efficacy of education. The criticisms from politicians and employers about the failure of school curricula to meet manpower demands, attempts by national governments to make curricula more vocationally oriented and attempts to privatise education, all indicate the belief that education is an investment in human capital. Early views on the human capital theory, however, tended to regard economic development as the ultimate objective. Brown and Lauder's contemporary views on the relationship between education and economic development, see the improvement of the material world for the betterment of human life as the ultimate objective. Economic development is only a means towards this objective, not an end in itself.

Brown and Lauder (1992) argue that education systems, training and employment can be organised in different ways, depending on what employers, politicians, trade unionists and others are trying to achieve. What remains unresolved in this suggestion is the question of the 'powerless' or less advantaged members of society who have little or no say in policy matters and practice. Methods of production reflect and influence social relations in organisations and societies. According to Brown and Lauder, (1992) highly

developed divisions of labour which characterise 'fordist' capitalist modes of production, lead to 'low-trust' relations in organisations. Employees in such organisations demonstrate minimum levels of commitment to their work. Central to Brown and Lauder's thesis is the notion that such:

...low-trust organisations and societies gravitate towards 'low-ability' systems of education and training in terms of the collective pool of skills, knowledge, and know-how which an organisation or society is able to deploy. (Brown and Lauder, 1992, p. 7)

In such 'low-ability' systems, education is organised to cater for the top 20 per cent of the school population. Its main objective is to form or maintain an 'elite' group of technocrats whose purpose is to control and direct productivity and economic development. As Brown and Lauder (1992) observe, the exclusion of 80 per cent of the school leavers and the wastage of talent which this entails is due to the decreasing level of technical skills required in most jobs. The mastery of specific skills seemed more appropriate in 'fordist' mass production systems in which most operations were standardised and products had a long market life. However, due to automation and computerisation of manufacturing systems, modern jobs require little more than repetitive routines that can easily be learnt without prior training. Due to globalisation and increasing competition, industrial products only last for short periods of time on the market before they need to be replaced with more competitive ones. The overriding concern with previous capitalist education systems was the production of a workforce of highly but narrowly skilled 'conformists'. Such workers were thoroughly skilled in specific areas but could not adapt easily to new requirements in production. However, current economic circumstances require people with broad-based education, who are

versatile and innovative.

In Zimbabwe, colonial vocational education for Africans was based on the English model for working class children and emphasised the ability to follow instructions accurately without question. Referring to the English system as 'traditional' Hirst and Peters (1970) observe that such education was conceived too much in terms of a set stock of information, simple skills, and static conformity to a code. Because of rapid technological advances, the introduction of computerisation and automation in production systems, there is now need for a workforce that is both academically and technologically competent and versatile (Brown and Lauder, 1992; Young, 1992). The fact that capitalist production systems seem to require increasingly lower levels of manual skills explains the argument, particularly held by economists and international donor agencies that schools should not concern themselves with imparting technical and vocational skills. They argue that these are best and easily acquired on the job. Brown and Lauder (1992) challenge this view and suggest the harnessing of the:

... wealth of talent to empower the population for active citizenship as well as for their future occupational roles. ...collective intelligence will be central to the establishment of sustainable economic growth (p. 7).

The development of 'collective intelligence' and the provision of technical skills to a wider proportion of school pupils is particularly relevant to developing countries like Zimbabwe. Maintaining an education system that is elitist and only responds rather than helps towards transforming the inherited capitalist economic system is contrary to post-independence expectations of the majority of the population. It perpetuates under-utilisation of human resources (talent wastage) similar to what is being adversely

experienced in advanced capitalist economies (Brown and Lauder, 1992). Elitist education served the needs of colonialists who used it as one of their ways to marginalise the majority indigenous African population. English education which the colonial administrators adopted:

...was seen primarily as a means of differentiating elites from the masses. ... It was a badge, distributed according to an accident of birth, which represented and reaffirmed the privileges of the economically and politically powerful. (Brown and Lauder, 1992, p. 10)

Both Marxist and non-Marxist writers agree that 'elitist' education has its roots in the historical developments of capitalist economic systems, (Bowles and Gintis, 1976). Unlike non-Marxists, Marxists tend to give capitalist economic requirements a determinist role in educational and other social policies. They do not explain other factors that result from the 'micro' level, such as the effects of individual perceptions and motivations. It is the contention of this study that school systems are *influenced*, but *not* entirely *controlled* by the requirements of capitalists. Nevertheless the influence of capital played a significant role in the development of Western capitalist education systems and continue to do so in post-colonial countries.

Brown and Lauder (1992) describe stages in the development of Western capitalist education systems in terms of three 'waves'. The 'first wave' covers early education until the post-World War II period. Education then was largely organised to reinforce the patriarchal relations that existed in social life. The education system reflected and maintained the stratified structure of society according to social class, race and gender. The rapid social and economic changes experienced, particularly after World War II, led

to pressures to expand the provision of educational opportunities. The increased demand for a skilled workforce also gave impetus to the removal of such educational barriers and increased opportunities for working-class mobility. These developments gave rise to the 'second wave'.

'Second wave' or bureaucratic education was characterised by what Brown and Lauder (1992, p. 11) call a "...set of rules, procedures, and practices which conform to the principles of bureaucratic organisation." In principle, this meant a change from 'patriarchal' to 'meritocratic' selection. However, they point out to the contradiction inherent in bureaucratic education "...of seeking to promote a 'talented' few while attempting to 'cool out' the majority...", which has resulted in working-class resistance. The notion of 'meritocracy' purported in such education is based on the assumption that individuals can be identified and channelled into specific occupations according to their innate ability, as determined by means of intelligence quotient (IQ) tests. Accordingly:

...the curriculum should be differentiated according to ability because 'intelligent' people will choose or be directed into taking subjects such as physical science, mathematics, and foreign languages. ...Less 'intelligent' people will take the less demanding subjects such as home economics, typing, and woodwork. (Brown and Lauder, 1992, p. 14)

Proficiency in the 'difficult' academic subjects is believed to reflect a general ability to engage successfully in professional and managerial work. Recruitment practices therefore reflect this as a rational process. The validity of IQ tests is however problematic. Brown and Lauder (1992) point out that even after taking IQ scores into account, social origins continue to play a decisive role in determining educational performance and occupational

distinctions. They argue that IQ and educational attainment are influenced by social division of labour.

Bureaucratic capitalist systems are attaching increasing importance to educational qualifications and the division of labour. Brown and Lauder (1992) concur with Collins (1979) that the employment sector use qualifications (credentials) as a bureaucratic device to screen and control the supply of new recruits. Educational qualifications are therefore not used to identify school leavers with particular technical or vocational skills, but to show which ones possess the characteristics of discipline and obedience that schools are expected to impart. Employers are not interested in the type or content of education, but the level reached. Their rising educational demands, even for semi-skilled occupations, is not a reflection of their need for higher technical skills, but merely an inflation of educational qualifications. In order to give more weight to their demands for higher educational credentials, employers 'professionalise' jobs. Credentials are used predominantly for purposes of exclusion, domination and inequality, not for their relevance to particular occupations. This view is reiterated by Collins (1979) who argues that the upgrading of credentials is often the result of credential inflation rather than an increased demand in skills.

Because credentials have become:

...an increasingly important commodity which can be exchanged in the labour market, the 'certificate' has been seen by a large number of students and their parents to be more important than what is taught or learnt. (Brown and Lauder, 1992, p. 19)

Education emphasising the acquisition of 'certificates' rather than 'skills' does not have to be 'relevant' to the formal employment sector if employers are not interested in its content. Vocationalising education is therefore not seen as an efficient and economic way to provide credentials. The cheapest way of achieving this is through the provision of academic education. Such education does not have to emphasise creativity and innovation, since employers are not looking for these attributes either but conformity.

Brown and Lauder (1992) agree with Max Weber's assertion that the fundamental concerns of bureaucratic education are knowledge and discipline. Such education is characterised by the infusion of knowledge and discipline "...into an indivisible set of bureaucratic rules, rituals, and procedures governed by ...the timetable" (Brown and Lauder, 1992, p. 21). Students trade their compliance to the school system for knowledge, which is converted to credentials to be traded on the market for jobs. However, bureaucratic education is designed to confer success on a minority of the school population only. Consequently, compliance with the requirements of schooling is still not a guarantee for jobs. Nevertheless, pupils keep on competing for the 'limited' employment opportunities. They see no other alternative route to economic and social success besides the one through education. The majority of pupils who are not absorbed into the economic system blame themselves for failing to acquire the necessary credentials. In this way, bureaucratic education systems 'legitimate' their selectivity and their inherent injustices.

Current worldwide concerns for dwindling economies have given rise to 'free market' solutions to education. As Brown and Lauder (1992, p. 24) observe, the 'new right' in

Britain argue that the ideology of meritocracy and democratisation of education have resulted in education that does not meet the 'needs' of most students. Such education is criticised for failure to inculcate pro-industrial attitudes and a regard for economic realities. Advocates of 'free market' education purport that such education allows for 'consumer choice' in educational provision. The basic notion is that the state should leave the task of educational provision to parents. Brown and Lauder (1992, p. 24) describe this as an "ideology of parentocracy", whereby the education a child receives depends on the wealth and wishes of parents rather than the abilities and efforts of pupils. This implies that pupils from privileged social backgrounds receive better schooling since their parents can afford to send them to schools with superior resources. The proliferation of well-resourced, high-fee paying schools for a minority of pupils, while the majority of them remain inadequately catered for, is one feature of 'free market' education. The existence of 'elite' schools for the rich and less 'successful' schools for the less privileged pupils, only accentuates 'talent wastage' and promotes social-class disparities. As pointed out earlier, pupils in schools with less resources tend to under-achieve and attain lower grades in public examinations. This does not only perpetuate social class disparities but is also contrary to the objective of maximising the development of human resources to facilitate economic progress.

Having criticised both 'first' and 'second wave' education systems, Brown and Lauder (1992) propose what they term 'third wave' education. This they believe, helps to generate 'high-ability' systems of education which are necessary:

...to provide the intellectual, technical, and creative resources ...required to achieve sustainable economic growth and for individuals to participate actively

in a more complex, information-rich world, which is rapidly transforming existing patterns of social and economic life. (p. 26)

Such education promotes 'collective intelligence' in which the main concern is not the selection of a talented few, but the promotion of the diverse capabilities and talents of all pupils. This is an education for 'empowerment' as contrasted with that intended to socialise the majority of pupils into believing that they are failures who cannot contribute towards the economy.

One way in which Brown and Lauder (1992) think collective intelligence can be fostered is by discarding streaming, which they contend prejudices pupils' capabilities. They believe that channelling pupils into specific curricula tracks that lead to particular routes in industry, should be delayed as long as possible in order "... to provide the greatest opportunity for students' intelligence and creativity to flourish" (Brown and Lauder, 1992, p. 30). They also propose the development of a 'common educational culture' by breaking down social class, gender, and racial barriers within the education system. This would mean bringing an end to sexist curricula practices in which boys are encouraged to take 'male subjects' such as; metalwork, woodwork, and technical design courses, while girls are channelled into 'female subjects' such as; home economics, child-care, and office practice.

Brown and Lauder (1992) recommend the development of a broad based curriculum that offers academic, technical and practical subjects for all pupils, at least during the compulsory years of schooling. They suggest that the education system should be organised on the premise that all, not just a few pupils have the capability to succeed

in both practical and academic subjects. A broad based curriculum is particularly necessary in this day and age of rapid technological change since it is meaningless to provide pupils with specific skills which are non-transferable and which soon become obsolete.

According to Brown and Lauder (1992), the curriculum should adopt an interdisciplinary approach which reflects real-life situations. Subject specialisation, they contend, does not help pupils understand or solve fundamental human problems such as the destruction of non-renewable ecological resources, environmental pollution, HIV and the Aids virus or political issues. In this regard, interdisciplinary problem-solving should be the central concern of school curricula. New forms of assessment would be required in which wider competencies are tested, not just narrow skills. These recommendations are made in reference to industrialised countries like the United Kingdom in which vocational education had previously been narrowly conceived and linked more with social control rather than economic development.

Although Brown and Lauder's observations are made specifically in relation to situations in developed capitalist economies, the central arguments are largely applicable to post-colonial developing countries which face even greater challenges. Post-colonial states consider the transformation of the inherited colonial education systems as paramount to social, political and economic progress. The fact that education remained one of the main areas of conflict between the indigenous majority populations and the colonial minorities is an indication of the faith placed in education in bringing about socioeconomic and political progress at both national and individual levels. Arguments

that education does not bring about social and economic change cannot convince post-colonial nations. They perceive how colonialists, regarding 'overeducating' the indigenous population as a threat to their hegemony, controlled and imposed numerous restrictions on educational provision (chapter 2). In many respects, colonialists succeeded in inhibiting the socioeconomic mobility of the majority African population through restrictions in access to education. Since education played a key role as a mechanism to curb the progress of Africans during the colonial era, it stands to reason therefore that it can be used to empower them. However, numerous abortive programmes and schemes continue to be introduced in attempts to bring education systems to respond to post-independence expectations. Vocationalisation of school curricula remains one of the most attractive but elusive strategies for education planners and politicians attempting to bring about social change.

4.8 Summary and Conclusions

This chapter forms the theoretical core of the current investigation. It examines from a theoretical perspective the assumptions and issues surrounding the provision of school-based vocational education, particularly in post-colonial developing countries. Although the theoretical perspectives, particularly the human capital and educational reproduction theories are implicit in the vocationalisation debate discussed in chapter 3, they have not been specifically addressed. Research findings showing that the costs incurred in providing vocational education are higher than those in academic have been largely predictable. Cost-benefit analyses such as Psacharopoulos and Loxley (1985) have had more influence on other academics than policy makers. Such studies have only explained the status quo of vocational provision or outcomes and have not investigated the

underlying socioeconomic and political factors. The theoretical basis of the studies have not been ascertained. Consequently, the vocationalisation debate has tended to pursue issues separately without relating vocational provision to the broader discourse concerning education, economic development and social change in particular contexts.

It is concluded from the theoretical discussion that school-based vocational education cannot be assessed by simply examining school factors or comparing the costs of its provision with the labour market outcomes. The socioeconomic and political factors influencing specific programmes need to be taken into account. Although it is concluded that both the HC and ER theories are not readily applicable to situations in post-colonial states like Zimbabwe, the theories highlight factors that have remained concealed in empirical investigations of specific programmes. Human capital and educational reproduction theories represent the two polarities of the vocationalisation debate but neither of them is sufficient to explain educational provision on its own. While human capital theorists have tended to ignore the social aspects and political economy of educational provision, educational reproduction theorists have not paid due regard to economic considerations in schooling. Educational reproduction does not seem to explain educational demand and tends to give capitalist production systems a deterministic role in educational provision and outcomes. The concern with the shortcomings of either of the theories has given rise to contemporary human capital views in which neither the economic 'superstructure' nor societal requirements determine personal choice and destiny. It means therefore that neither economic nor ideological machinations can fully direct individual choice and propensities. Educational provision cannot be understood by analysing the 'macro' economic and political forces without taking into account

'micro' factors operating at school level and peoples' perceptions, reactions and influence on such provision. In this regard, an empirical investigation was carried out to find out the factors which influenced the introduction of the ZNCC and NFC pilot schemes in Zimbabwe.

Part of the fieldwork was carried out to investigate the imperatives that led to the successive introduction of the ZNCC and NFC pilot schemes and the current policy regarding school-based vocational education. The fieldwork was necessitated by the fact that the pilot schemes have not been documented even though the original ZNCC was introduced in 1987 and has since been replaced with the NFC pilot scheme. Chapter 6 examines the socioeconomic and political factors underlying the introduction of the 1986 Education Plan through which the current vocationalisation policy was conceptualised. It is argued in the current study that the viability of school-based vocational education cannot be ascertained on the basis of its labour market outcomes. The goals of vocational education or indeed schooling generally should not be limited to the immediate requirements of the economic sector. However, its acceptance by the parents and pupils seems to play a vital role in its success. As shown through the successive failures of colonial attempts to vocationalise school curricula in Zimbabwe and the abortive EWP pilot scheme, the perceptions of parents and pupils as the users and teachers as the implementers of vocational programmes has a great bearing on its success. In this regard the perceptions of pupils, teachers and education officers (EOs) with regard to the pilot schemes were also investigated. The theoretical arguments arising from the current chapter help in the interpretation of the fieldwork data and in drawing conclusions regarding the implications of fieldwork findings to the current

vocationalisation policy in Zimbabwe. The next chapter 5 describes the methods and procedure used in the field to generate the data reported in chapters 6 and 7.

Chapter 5: Methods and procedure used to collect fieldwork data

5.1 Introduction

The current study investigates whether the 'vocational fallacy' is confirmed in recent attempts to vocationalise secondary education in Zimbabwe. This is done at two broad levels:

1. From an international perspective it examines the conflicting views between education policies advocating vocationalisation of secondary education and the literature questioning the efficacy of such policies as discussed in chapters 3 and 4.
2. Fieldwork data reported in chapters 6 and 7 investigate whether the considerations which influenced the current vocationalisation policy in Zimbabwe conform to the premises on which the vocational fallacy is based.

The overall study uses the following approaches to investigate:

- (a) International literature concerning the 'vocational school fallacy' is reviewed to identify the emerging issues;
- (b) The socioeconomic and political factors underlying vocationalisation of school curricula are examined through the human capital and educational reproduction theories.
- (c) Fieldwork data on the ZNCC and NFC in Zimbabwe are collected in order to examine the vocationalisation policy emanating from the 1986 Education Plan and the subsequent ZNCC and NFC pilot schemes in relation to the issues emerging from the vocational fallacy.

Chapter 2 explores the historical context and legacies of colonial education policies in Zimbabwe. The issues emerging from the vocationalisation debate are examined through

a survey of international literature in chapter 3. The literature survey in chapter 3 shows how the main issues surrounding school-based vocational education have followed three main lines of thought; economic, sociological, and pedagogical. The debate is pursued from the theoretical perspective in chapter 4 in order to examine the socioeconomic and political factors influencing vocationalisation of school curricula. The current chapter describes the methods and procedure used to collect fieldwork data concerning the 1986 Education Plan and the subsequent ZNCC and NFC pilot schemes. The fieldwork investigation was conducted to collect two main types of data;

- (a) the context and the imperatives underlying the 1986 Education Plan and the ZNCC and NFC pilot schemes discussed as reported in chapter 6.
- (b) the background characteristics and perceptions of the pupils, teachers and education officers involved in the NFC pilot scheme reported in chapter 7.

5.2 Methods used to collect data

Taking into account the limitations of finance, time and timing of the study, it was decided to carry out a case study of the pilot schools in two out ^{of} the nine administrative regions in the country. According to Cohen and Manion (1985), the purpose of a case study is, "... to probe deeply and analyse intensively the multifarious phenomena that constitute the life cycle of the unit with a view to establishing generalisations about the wider population to which that unit belongs" (p. 120). Bell (1987) reiterates the appropriateness of a case study when examining one aspect of a problem in depth within a limited time scale. The case chosen for the study should however, bear characteristics that are representative of other schools. This view is supported by Shulman (1981) who asserts that the claim that one is conducting a case study requires that an answer be

provided to the question, "What is this a case of?" (p. 9). A case study was considered appropriate since the fieldwork findings were to provide an insight into the vocationalisation scheme and were not intended to be generalised beyond the schools investigated.

Both formal and informal methods were used to collect data from pupils and teachers using mainly questionnaires and interviews. Questionnaires were administered to pupils, teachers, headmasters, education officers (EOs) and other government officials. Semi-structured interviews were conducted mainly with teachers and headmasters, Ministry of Education officers and education coordination officers in the Confederation of Zimbabwe Industries (CZI). Unstructured interviews were also conducted with teachers, parents and pupils. Document analysis was also carried out to collect information on the vocationalisation policy and the current status of the NFC pilot scheme.

5.3 Procedure

Fieldwork research was conducted for four months in Zimbabwe, from February to May 1993. It involved all the six schools which were offering NFC courses and three which had discontinued the vocationalisation scheme in Harare and Mashonaland East Regions. After the necessary permission to carry out the fieldwork research was granted by the Ministry of Education and Culture (see Appendices 6 and 7), the questionnaire for pupils was piloted as stated in section 5.2.1. Familiarisation visits were made to all the schools included in the study and appointments were made for the administration of questionnaires and interviews with headmasters, teachers and pupils.

5.4 Sample

Two out of the nine administrative regions in the country, were selected for the fieldwork study. Harare and Mashonaland East regions, were found to be both accessible and convenient. Out of the 28 schools piloting the vocationalisation scheme in 1988, six of them were in Harare while two were in Mashonaland East. When the current survey was conducted in 1993, two more schools in Harare and one in Mashonaland East regions had since joined the scheme. However, only one out of the original six pilot schools in Harare was still continuing with the programme while another school was offering the NFC as an extra curricula activity. The survey included seven of the eight original pilot schools and two others which joined the vocationalisation scheme later. Data could not be collected from one school since none of the current teachers had taught on the ZNCC scheme.

5.4.1 Pupils

180 pupils doing the NFC courses participated in the study. They all completed questionnaires, which were administered personally by the researcher (Appendix 1). A trial run of the questionnaires was conducted at one of the original pilot schools which was offering the NFC as an extra-curricula activity. Questions which appeared to be unclear to pupils were then modified accordingly.

The questionnaires were administered to pupils at the three schools offering NFC courses in Harare and another three in Mashonaland East region. Pupils attending the four urban pilot schools were mostly day scholars while those at the two rural schools were boarders. About 62 per cent of these pupils were at the four urban pilot schools

and the other 38 per cent were at the two rural schools. Overall, these respondents represent over 95 per cent of all the NFC pupils in thirteen classes at the six pilot schools offering the NFC courses. 119 of the pupils (66 per cent) were in form three while the other 61 (34 per cent) were in form four. There were 108 boys (60 per cent) and 72 girls (40 per cent) in the sample over 87 per cent of whom were aged between 15 and 17 years (Figure 1). Nationally, the ages of pupils at the same levels of education generally vary by approximately two years. This is a legacy from the colonial period when African pupils were not allowed to start school before the age of seven, while white, Asian and coloured children could go to school from the age of five. Figure 1 shows the distribution of pupils doing the NFC courses by age.

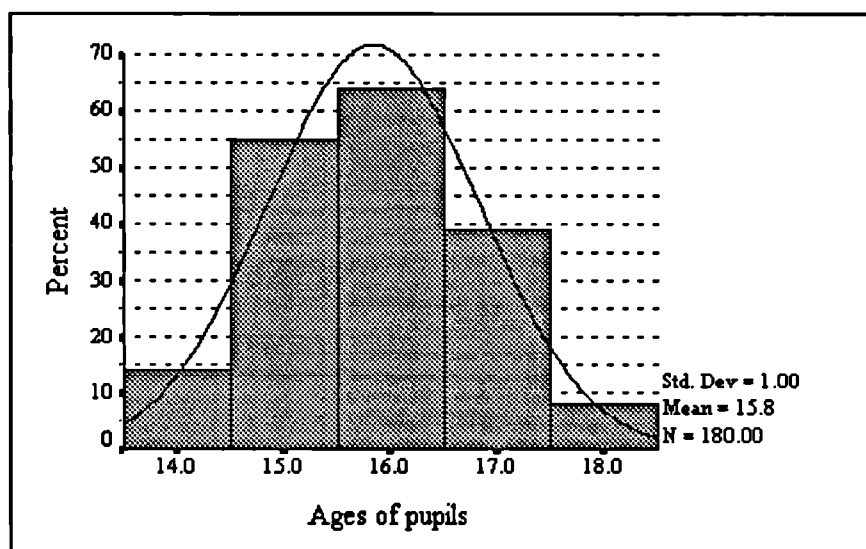


Figure 1: Distribution of NFC sample pupils by age

The pupils were divided into six different NFC subject areas. Machine shop engineering was offered at one of the urban schools. Brick / Blocklaying was offered at the two rural schools and involved the use of both bricks or cement blocks in the construction of

buildings. Textile Design involved garment making while Textile Technology involved tie and dye and other forms of fabric treatment. The traditional tendency for technical subjects to be offered according to gender was apparent in the NFC programme. Although five of the six schools offering NFC courses were co-educational and 40 per cent of the pupils in the sample were girls, only 5.6 per cent of the girls were doing a male dominated subject (Building), while twelve per cent of the boys were doing female dominated subjects (Catering and Textile Technology). Officially, since the attainment of political independence there are no gender restrictions to the subjects which pupils can study.

The technical subjects offered generally depend on the location of schools. Unlike urban schools, rural schools tend to offer subjects which do not require extensive use of electricity or a constant supply of perishable items. However, the rural schools included in this study all had electricity. Figure 2 shows the distribution of pupils according to their NFC subjects.

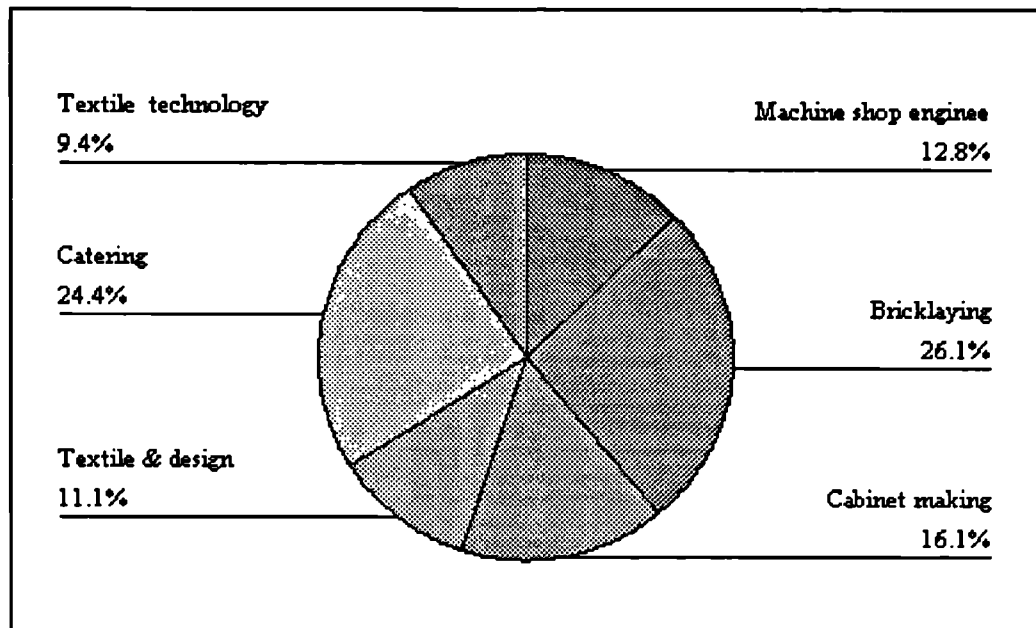


Figure 2: Distribution of NFC pupils by subject

5.4.2 Teachers

Both interviews and questionnaires were used to collect data from teachers to find out their characteristics, views on the ZNCC and NFC pilot schemes and its implementation. Some of the statistical summaries are provided in Appendix 4. Data were collected on the basis of the issues arising from international literature regarding the provision of vocational education at secondary school level.

Fourteen teachers took part in the study; ten males and four females. All the NFC teachers of pupils included in the current study participated. Information was also collected from one teacher who had retired after teaching the original ZNCC courses and two others who had taught the ZNCC but the programme had since been discontinued at their schools. Overall, the ages of teachers ranged between 29 and over 53 years. Five of them were aged between 29 and 33, three were aged between 34 and 38, one was

aged between 39 and 43 years, another between 49 and 53 and the other 4 were over 53 years of age. Their experience teaching technical /vocational subjects ranged from less than one year to over 25 years. Only one teacher had been teaching the subjects for less than one year. Three of them had been teaching for six to ten years, five had taught for eleven to twenty years and three had taught for over 25 years (Appendix 2).

5.4.3 Education officers

Eight out of the 13 Education Officers (EOs) Technical and Vocational Education, representing six of the nine administrative regions in the country completed questionnaires. Two of them were for Harare, two for Masvingo, one for Mashonaland East, one for Mashonaland Central, one for Matabeleland North and one for Matabeleland South. Three EOs did not return their questionnaires and the other two could not be contacted. Seven of them were males and one was female. Seven of them were aged between 36 and 45 while only one was over 45 years of age. All of them had trained as teachers and had teaching experience ranging from eleven to over twenty-one years. Seven of the EOs had gone as far as 'O' level in their academic qualifications while only one had 'A' levels. Six of the eight EOs had attained B.Ed. degrees while one had a Masters degree and the other one had a Secondary Teachers Certificate as the highest professional qualification. Three of the eight EOS also had other vocational qualifications outside education.

Their overall experience as EOs varied from three years to nine years. Three of them had been in their current provinces for three years, one had been in the same province for four years while the other three EOs had been there for five years. Only one had

remained in the same province for eight years. Asked if they had any other working experience, two of them indicated that they had none while one had worked as a machine operator, one as a carpenter, one worked for a shoe manufacturing company, one for the Curriculum Development Unit (CDU) and two had been lecturers at a teachers college. Although the questionnaire for the Education Officers was shorter, the questions were similar to those posed to teachers. The main purpose of the information from the EOs was to find out if they perceived the programme in the same way as the teachers . Appendix 3 shows the questionnaire administered to EOs.

5.4.4 Other respondents

Semi-structured interviews were conducted with: a deputy secretary in the Ministry of Higher Education; an acting deputy chief education officer in the Ministry of Education and Culture; two headmasters of schools offering the NFC scheme; two officers in the Confederation of Zimbabwe Industries; a parents teacher association (PTA) representative of one of the schools; some apprentices who went through the ZNCC course and some who did not.

5.5 Data analysis

Since the study is not of an experimental design and the data is mainly categorical, non-parametric statistical analyses are employed in the form of frequency distributions and cross-tabulations of the variables. The findings from the current study are not intended to be generalised. The purpose of the study is to provide insights about vocational education which might nevertheless have implications on vocationalisation in Zimbabwe and other developing countries.

Fieldwork information was collected on pupils' background characteristics, their perceptions of the NFC courses and the occupations they aspired to. The background characteristics of teachers and EOs as well as their perceptions of the ZNCC and the NFC pilot schemes were also investigated. Fieldwork findings are reported in chapters 6 and 7. The context of the vocationalisation policy which led to the introduction of the successive pilot schemes is discussed in chapter 6. The background characteristics and perceptions of pupils with regard to the vocationalisation schemes are discussed in chapter 7. The findings are analysed in relation to the 'vocational fallacy' views arising from the literature review and the theoretical discussion in chapter 4.

Questionnaire responses which were in the form of quantifiable fixed categories were coded and summarised using the SPSS-X computer statistical program. The data were later converted to the SPSS-PC and subsequently to the SPSS-PC for Windows program. This was necessitated by changes in the statistical software during the course of the study. However, the programs are compatible and therefore the initial coding of the questionnaire results was not affected in these changes.

Information collected through semi-structured interviews was transcribed from audio tapes and analysed separately. The main interview questions were derived from the questionnaires. Interview questions were intended to seek personal opinions of the respondents and were therefore more open-ended. The analysis in chapter 7 is based mainly on the quantitative data from the questionnaires. Information from the interviews is used to deduce further interpretations from these responses in relation to the theoretical discussion in chapter 4. Qualitative responses from the questionnaires and

interviews are used to supplement the quantitative data in seeking explanations to the research questions. Non-parametric descriptive statistics are used to analyse the data and establish any patterns that may exist between pupils' career choices and their background characteristics and responses pertaining to their perceptions of the NFC. The responses from pupils, teachers and EOs are analysed in relation to each other and the intended goals of the NFC pilot scheme.

The next chapter investigates the current vocationalisation policy in Zimbabwe and the imperatives which influenced the introduction of the 1986 Education Plan and the subsequent ZNCC and NFC pilot schemes.

Chapter 6: The 1986 Education Plan and recent attempts to vocationalise secondary education in Zimbabwe

6.1 Introduction

The theoretical discussion in chapter 4 revealed that the provision and outcomes of school-based vocational education and indeed schooling generally are influenced by the prevailing socioeconomic and political factors. The current chapter examines these factors in relation to recent attempts to vocationalise secondary education in Zimbabwe. Through empirical evidence, it investigates the imperatives which led to the successive introduction of the Zimbabwe National Craft Certificate (ZNCC) and the National Foundation Certificate (NFC) as pilot schemes to vocationalise secondary education in Zimbabwe. The chapter identifies the main considerations which motivated the vocationalisation policy and provides the context in which the ZNCC and NFC schemes were perceived.

6.2 Socioeconomic and political factors influencing post-independence policies to vocationalise secondary education

Education policies in post-colonial countries cannot be discussed without taking into account the socioeconomic and political factors influencing them. As mentioned in chapter 2, Zimbabwe attained political independence in 1980 after ninety years of colonial rule. Its population at independence was estimated at just over seven million and was recorded at over 10.4 million in the census figures of 1992. The national average annual population growth rate between 1982 and 1992 was estimated at 3.13

percent (Central Statistical Office, Zimbabwe, 1992). The country inherited an economic system characterised by gross economic disparities between an advanced industrial urban and an underdeveloped subsistence rural sector. The productive sector of the economy was almost exclusively controlled by the white minority population as well as multinational companies and excluded the ninety percent black majority population.

It was premised in chapter 4 that post-independence government attempts to transform the economic system were pacified by resistance from both local and international capitalists who wanted to maintain their control and domination of the formal economic sector. The Lancaster House Agreement which formed the constitutional framework for policies during the first ten years of independence prevented the possibility of any radical economic reforms. Also, intimidated by the possibility of an exodus of the skilled white personnel who controlled production systems, the new government thought it prudent not to adopt economic policies that would be regarded as too radical. Colonial policies had persistently prevented black people from becoming highly skilled, preferring even to recruit white people from South Africa or abroad. While the access of black people to educational facilities was limited generally, the restrictions to technical and technological areas at higher levels were even more restricted. Black people were particularly under-represented at institutions like the Harare and Bulawayo Polytechnics and in engineering and other technologically-oriented faculties at the then University of Rhodesia. The need to bring an end to these disparities and enable more black people to acquire high-level skills was therefore inevitable after independence and led to a new emphasis in the provision of vocational education at all levels.

However, reform policies remain constrained by the legacies of the inherited economic system. The formal sector dominates economic activity in Zimbabwe, although it involves and benefits only a minute proportion of the population. The productive sector of the economy is fairly diversified between mining, manufacturing, construction, and services. However, it is "... characterised by an extremely high degree of inequality in the distribution of income, assets (especially land), and access to basic services" (Government of Zimbabwe, 1992, p. 5). Table 1 shows the occupational structure of the formal economic sector as reflected in the First Five-Year National Development Plan (FFYNDP) 1986-90.

Table 1: Wage earning employees by industrial sector, 1984-90

SECTOR	1 000 PERSONS			A v e . Annual % Increase 1984-90
	1984	1985	1990	
1. Agriculture	262	260	290	2.2
2. Mining and quarrying	56	56	65	3.0
3. Manufacturing	167	169	190	3.0
4. Electricity and water	7	7	8	2.7
5. Construction	45	45	52	2.9
6. Finance/insur. & real est.	16	16	18	2.7
7. Distribution & catering	80	83	99	3.6
8. Transport and commun.	50	50	61	4.1
9. Public administration	88	88	100	2.6
10. Education	82	82	97	3.7
11. Health	19	19	23	3.9
12. Domestic services	99	99	99	0.0
13. Other services	55	55	65	3.4
TOTAL	1 026	1029	1173	2.7

Adapted from: The First Five-Year National Development Plan, 1986-90 (Republic of Zimbabwe, 1986, p. 19)

The productive sectors with the highest number of employees are agriculture, manufacturing and mining. However, most people are engaged in the service sectors, particularly public administration, distribution and catering, domestic services and education. The overall number of people in formal employment is only a fraction of the population in the age range of fifteen to sixty years. The majority of school leavers have

no prospects to secure formal sector employment or training. Over 250,000 pupils leave school every year, most of them with four years of secondary education whereas only 20,000 new jobs are generated per annum (Colclough et al 1990). Paradoxically, the formal sector faces acute shortages of skilled personnel.

Economic development remains the major factor influencing educational reform policies since the attainment of independence in 1980. Human resource development is particularly emphasised in attempts to boost the economy. It is believed that providing pupils with vocational skills before they leave school will not only solve youth unemployment but develop a skilled work-force for economic progress. These goals are implicit in both the first three-year Transitional Development Plan (TNDP) for the period up to 1985 and the FFYNDP covering the period 1986 to 1990 (Republic of Zimbabwe, 1986 and 1988 respectively).

The economic situation has not been conducive for the attainment of these goals. After the initial economic surge in 1980 and 1981, the economy has been mainly on the decline for over a decade. The gross national product (GNP) rose by approximately fourteen percent in 1980, "...reversing the downward trend of the previous years and surpassing even the high growth rates of the 1970s" (The Economist Intelligence Special Unit, 1981, p.22). However, employment figures which stood at 1,026,000 in June 1980 fell to 1,001,000 by the end of the same year. As table 1 shows, the number of people in wage employment in 1984 had increased back to the 1980 level of 1,026,000. The downward trend in formal sector employment is acknowledged in the FFYNDP (Republic of Zimbabwe 1986) which attributes this to the economic recession, drought

and a high population growth rate which led to the large number of school leavers entering the labour market each year. Unemployment was predicted to increase continually, making it one of "...the most socially destabilising problems throughout the Plan period." (Republic of Zimbabwe, 1986, p. 2)

Although it acknowledged the rising unemployment, the FFYNDP also indicated that, "...the demand for skilled personnel which was 'hidden' by the recession could become a major constraint as the economy attains and sustains high levels of growth." In this regard, the FYDP considered the development of a highly skilled workforce particularly in science and technology, as central to its development strategies. It sought to create and develop an indigenous scientific and technological capability. It was believed such strategies were necessary to enable, "...the restructuring and modernisation of the economy, development of human resources and alteration of ownership." (Republic of Zimbabwe, 1986, p. 2) Technological development was especially cited as the key factor to economic development and economic liberation since it would determine the country's ability to process its abundance of agricultural, mineral and other raw materials and produce its own goods and services. It was envisaged that vocationalising school curricula would help meet this objective.

The policy to vocationalise secondary education was also motivated by government's objective to transform the inherited capitalist economic system along socialist lines. The government sought to restructure the curriculum according to the Marxist perspective which emphasised Polytechnic education. Such education rejects the dualism between 'theoretical' and 'practical' knowledge, seeing all school learning as arising from

everyday real-life situations. It stresses the educative value of productive work in which theoretical knowledge, particularly based on natural sciences, is invoked. Practical subjects and natural sciences are therefore perceived as mutually interdependent and as the cornerstone of school learning of every pupil. The concept of education with production (EWP) which was introduced soon after independence as a new philosophy to guide educational thinking was based on this principle as Gustafsson discusses (in Lauglo and Lillis, eds., 1988).

Whether economic, social, political or ideological, the imperatives to vocationalise education were overwhelming after the attainment of political independence. Manpower development was especially singled out as, "... the most crucial variable in the field of technological progress and modernisation all of sectors of the economy" (Republic of Zimbabwe, 1986, p. 2). The objectives enunciated in the FFYNDP, emphasising human resource development were particularly pertinent in view of the need to democratise the economic system and include the majority black population which had hitherto been excluded. The compulsion to provide technical and vocational skills was also a response to the fact that the country relies heavily on the export of raw materials and depends on expatriate technological expertise. Strategic sectors of the economy are dominated by foreign investors who own approximately two-thirds of the capital investment in the economy. 84 per cent of the country's imports consist of intermediate and capital goods while the remaining 16 per cent comprises of imports in consumer goods. The production of most of the goods imported:

... involves relatively simple processes, most of which are readily available in Zimbabwe.

Thus, the type and quality of intermediate and capital goods demonstrate beyond doubt that the manufacturing industry does not provide the country with a sound base for self-reliant and self-sustained economic development. (Republic of Zimbabwe, 1986, p. 4)

Accordingly, the FFYNDP observed that all sectors of the economy were in dire need of skilled personnel with scientific and technological know-how. Scientific and technical subjects were to play a leading role in secondary schools in order to provide pupils with a sound base for technological training. The Plan stated that:

... the secondary school curriculum will be broadened to include a wide range of technical and vocational subjects which are oriented towards the manpower requirements of the production system. (Republic of Zimbabwe, 1988, p. 57)

These views underscore the thinking behind the persistent attempts to vocationalise school curricula not only in Zimbabwe but other post-colonial developing countries too. Vocational education is regarded as a means to develop work-related skills that can be developed further when pupils leave school. In this respect, it is meant not only to meet the immediate labour market requirements of the formal sector but to develop an indigenous skill base and enable more people to participate in the economy. Vocational education is meant to boost economic development and help solve school leaver unemployment. The views rest on the notion that education can contribute towards economic development. In 1986 the government announced its new plans to vocationalise secondary education in Zimbabwe, in line with the FYDP. Accordingly, the 1986 Education Plan was introduced to implement the new policy.

6.3 The 1986 Education Plan and the new vocationalisation policy

The new initiative to vocationalise secondary education was launched through the 1986 Education Plan. Generally referred to as the Structure and Content of Education, the Plan was formalised as an Act of Parliament in 1987. This was the first post-independence Education Act. According to the Ministry of Higher Education its main goal was to repeal the transitional government's 1979 Act, restate the general law relating to education in Zimbabwe and pave the way for the 1986 Education Plan. The 1986 Education Plan set out guidelines to direct a new policy to vocationalise education in the country and there was strong political support for the initiative.

The main objective of the Plan was to transform secondary education from its largely academic orientation and make it more scientifically, technologically and practically biased. It was an attempt to make the curriculum responsive to Zimbabwe's socioeconomic requirements. Box 6.1 outlines the main features of the new Education Plan:

Box 6.1: Main features that emerged from the 1986 Education Plan

1. The curriculum was to include a wide range of technical, commercial and other vocational subjects, in addition to the academic ones.
2. The requirements of the commercial and industrial employment sectors, were to determine the content of the technical and vocational subjects.
3. Pupils were to receive a vocational certificate in their area of specialisation, in addition to their GCE 'O' Levels.
4. Although the first two years of secondary education were open to all primary school leavers, only those who had passed the Zimbabwe Junior Certificate (ZJC) were to proceed to Form 3.
5. Both able and less able pupils were to do the vocationally-oriented Zimbabwe National Craft Certificate (ZNCC).
6. Pupils following the academically-oriented curriculum were to do at least one technical subject while those doing the ZNCC course had an academic core.

Two main models emerged from the policy to vocationalise secondary education. The first model comprised of practical and technical subjects that formed part of the general education of pupils, leading to 'O' level examinations. These were offered for educational purposes without the expectation that they would lead to direct employment upon leaving school. All pupils in forms one and two and most of those in forms three and four, were expected to take at least one of these subjects. Most schools in the country were already offering practical subjects when this policy was announced. The other model that emerged attempted to provide pupils with technical, commercial and other practical skills leading to either direct employment or a reduction in post-school training periods and costs. It was referred to as the Zimbabwe National Craft Certificate (ZNCC) and was one of the main provisions of the 1986 Education Plan.

Announcing the Plan, the then Minister of Education Dr. Mutumbuka asserted that although Zimbabwe had democratised access to education since the attainment of political independence, the structure and content of education had not changed. He

pointed out that the millions of children in primary schools and the hundreds of thousands of secondary pupils were following an academic curriculum as if all of them were academically capable and as if they would proceed to University education in academic subjects. He observed that where technical subjects were offered in schools, the examinations were set by non-vocational boards like the Cambridge Examinations Syndicate such that their vocational qualifications had no meaning to prospective employers in industry. This meant therefore that:

...the ever increasing number of pupils passing out of our education system and despite the annually increasing education budget, our children are leaving school (after eleven years) without any skill that is recognised by the world of work. ...the money spent on education ...is not optimally utilised in educating our future manpower because of the structure and the content that have outlived the era for which they were designed to serve (Mutumbuka, 1985, p. 1, Ministry of Education and Culture unpublished documents).

The Minister enunciated the new education policy in his speech at a workshop on the Structure and Content of Education at Belvedere Teachers College in July 1986. Referring to the existing secondary school curriculum he submitted that the school system had an overdose of academic subjects, and the few technical subjects that were taught, were badly taught and academically examined. This workshop which marked the official launching of the new initiative to vocationalise secondary education in Zimbabwe was attended by Ministry officials, teachers selected for the programme, school-heads and other relevant personnel.

As part of the new initiative, the Ministry decided that secondary education be divided into three stages. The first stage would be offered in Forms one and two in which pupils

were to follow a general education with a compulsory technical component of two subjects. The subjects offered would vary depending on the requirements of economic development in the country. It is the second stage of secondary education, (Forms three and four) that the 1986 Education Plan focused on, marking what was perceived as a radical departure from the prevailing system and philosophy of secondary education. Pupils who were following the academic line at 'O' level would still have the option to take a technical / vocational option at 'A' level while those pursuing technical / vocational education could also opt for an academic option. The third stage was for those pupils who continued into higher or further education for either 'A' level studies or technical training at the polytechnics or vocational training centres.

A screening device was to be 'carefully devised' at the end of Form two so that some pupils would pursue a form of 'applied education' while another group would follow a 'conventional education'. Pupils would be examined for their aptitude in technical or academic work through the Zimbabwe Junior Certificate (ZJC) examinations and be streamed accordingly. Academically inclined pupils would take the academic line but would nevertheless do at least one technical subject. Those technically inclined would pursue the applied subjects while at the same time taking some academic subjects. Pupils were to write the same papers in core academic areas at 'O' level, in order to facilitate the freedom to change from one stream to the other. It was believed that the method of selection based on aptitude in either academic or vocational subjects would destroy the stigma associating vocational education with less able children. It was also envisaged this would ensure that only pupils who were capable in either academic or vocational areas would be selected for the respective areas. Subjects were to be offered

in a way that would enable pupils to change from either academic or technical / vocational studies if they so wished. Pupils included in the pilot scheme were to continue taking the 'O' level technical subjects in addition to the vocational examinations set by the Further Education Examination Board (FEEB).

At a regional seminar on the Structure and Content of Education in March 1987, the Secretary of Education explained that pupils' capabilities and aptitudes, as reflected in the Form two examinations would determine whether they were to follow the vocational or the academic bias. Pupils following the vocational stream would do the same academic subjects together with those in the academic stream. Academic pupils were expected to take at least one vocational subject.

While the academic line would be administered by the Ministry of Education, the vocational line would involve the Ministry of Labour, Manpower Planning and Social Welfare (MLMPSW) and the industrial and commercial sectors. In 1987 the Ministry of Education was split into Primary and Secondary Education and Ministry of Higher Education. The labour and manpower planning sections of the Ministry of Labour, Manpower Planning and Social Welfare were moved to the Ministry of Higher Education which was charged with all training requirements in the country. Examinations in vocational subjects were to be approved by appropriate bodies in the industrial and commercial sectors with the hope that qualifications would be recognised by the world of work. At the end of this type of secondary education, pupils from the vocational stream could enrol at Polytechnics and Technical Colleges. Their vocational experience at secondary school level would not only shorten the training periods and

accelerate the production of skilled personnel for industry, but would also result in lower training costs since students would have acquired the basic skills normally covered during the first year of such training. At the Polytechnics or Colleges, the first two years of training would be equivalent to 'A' level studies so that those who wished could proceed to university for engineering or other technical degree studies. Since *all pupils* were required to take at least one technical subject, the plan would ensure that even pupils from the academic streams would be technologically literate before completing secondary education. Schools were to be 'twinning' to factories and other industrial establishments in order to ensure that pupils acquired the necessary work experience as part of their secondary education. The necessary contacts and arrangements were to be made at local levels.

In 1986, some senior officials from the Ministry of Education went on a fact-finding mission to several socialist and capitalist countries as part of the launching of the new vocationalisation policy. Among their recommendations, they emphasised the need to involve the public sector, parastatals and the private sector of the economy in the new vocationalisation plan. The courses offered were to be determined in consultation with the formal employment sector. Included in the courses envisaged were; Construction Technology, Wood Technology, Agricultural Science, Electronics / Informatics, various areas of Engineering, Nursing Science, Food Technology and Hotel Catering. The setting of technical / vocational examinations was to involve government ministries and the industrial sector while being coordinated by the MLMPSW. It was hoped pupils who had followed the vocational stream would leave school sufficiently proficient for employment in semi-skilled occupations or could proceed to a polytechnic, technical

college or other institution for further training. Chart 1 in chapter 7 shows the envisaged routes for pupils completing secondary education. It offers two distinct alternative routes, one for those wishing to proceed along academic lines and the other for those who intend to undertake advanced training at post-school institutions. The significant feature of this model is that both groups have the opportunity to proceed to university in their respective areas and there is a possibility of pupils changing from one track to the other.

6.4 Objectives of the vocationalisation policy

The main objectives of the new vocational education initiative could be summarised as follows:

6.4.1 Preparation for self-employment

In cognisance of the limited capacity of the formal sector to absorb the increasing numbers of school pupils leaving school every year, it was envisaged that by equipping them with vocational skills before leaving school, pupils would be able to set up their own enterprises individually or in groups. This was consistent with post-independence attempts to establish co-operative ventures as an alternative to the formal sector production system which only benefited a limited proportion of the population.

6.4.2 Preparation for employment

Since school curricula had remained largely academic, it was believed pupils leaving school lacked vocational skills that would enable them to secure employment. This view was particularly strengthened by the fact that the academic 'O' level curriculum that pupils followed was essentially meant for those proceeding to university and did not

therefore cater for the economic survival of those leaving school at this stage.

6.4.3 Applying theoretical knowledge practically

The insistence on providing vocational education to all pupils in secondary school was related to government attempts to relate theory and practice as reflected in the EWP concept. This was regarded as the guiding principle to guide post-independence educational thinking. From this perspective, vocational education was not only intended to meet the requirements of industry, but to relate school learning to everyday needs of individuals and society at large.

6.4.4 Preparation for further training

Since most pupils leaving school would not proceed to university, it was believed that the education of those intending to train in skilled areas needed to be focused appropriately. Pupils leaving school with vocational skills would not only need shorter periods of training thereby cutting the cost of training, but exposure to vocational education would enable them to make their career choices.

6.4.5 Development of positive attitudes towards manual work

This was related to the ideological goal of linking theory to practice as perceived along socialist oriented polytechnical education. The academic / vocational dichotomy was seen as inimical to post-independence development strategies.

Box 6.2 summarises the overall goals of the 1986 Education Plan.

Box 6.2: Main objectives of the 1986 Education Plan

1. To match schooling to the world of work by providing pupils with vocational qualifications that were recognised in industry;
2. To ensure that the vocational subjects offered were taught and examined in a more practical way. The existing 'O' level technical subjects were criticised for being academically examined;
3. To provide a vocational alternative for the majority of pupils who were unlikely to proceed to university. The academic curriculum was mainly oriented towards university education and therefore catered for a minute proportion of school leavers;
4. To broaden the education of all pupils and include both theoretical and academic work in order to provide school leavers with more options;
5. To provide a sound base for pupils wishing to proceed for further or higher education in technical areas.

6.5 Implementation of the vocationalisation policy

Following the announcement of the new vocational education policy, a Conference was held at Nyanga to explain the initiative to members from the private formal economic sector and relevant Ministries and discuss how to implement it. The thrust of the Conference was to devise ways of bringing practical subjects taught in secondary schools in line with the requirements of industry and the world of work generally. Following this conference, a Task Force was appointed to plan and work out the necessary details to implement the vocationalisation policy.

6.5.1 The Task Force

At the beginning of 1987, an inter-ministerial task force was set up comprising of

officers from the Ministries of Education and Culture, Higher Education, and Public Construction and National Housing. Its mandate was to put into practice the vocationalisation policy aimed at equipping secondary school pupils with skills that were relevant to the world of work. The involvement of the Ministry of Higher Education (MHE) was to ensure that the vocational qualifications from the pilot schools would be readily recognised and accepted at vocational training institutions and by the formal employment sector. The Ministry of Public Construction and National Housing was included so that it would effect any necessary renovations to buildings or repairs to machinery in government schools. The Task Force immediately set about carrying out the following functions:

- (a) identifying secondary schools which were to pilot the scheme and recommend them for final approval to the Ministry of Higher Education;
- (b) liaising with various Ministries and other relevant organisations responsible for preparing the syllabuses and certification.
- (c) comparing syllabuses used in schools at 'O' level and those in post-school institutions and decide what aspects they considered as most appropriate for the pilot scheme.

It was agreed to adopt the Zimbabwe National Craft Certificate (ZNCC) course which was being offered at St. Peters Kubatana Vocational Training Centre. The Vocational Training Centre (VTC) had been established adjacent to a conventional secondary school in 1980 by the catholic church as a private training institution and offered the ZNCC as a two-year post 'O' level pre-vocational training course for pupils wishing to proceed for apprenticeship training at polytechnics. With generous funding from German donors, the VTC was well equipped and was relatively successful. In 1984, the MLMPSW took

over the VTC and changed the entry level to Form three so that pupils could study the ZNCC course together with six other subjects as part of their 'O' levels. English, Mathematics, Science and Technical Drawing were offered as core subjects, in line with the requirements of the apprenticeship training they could pursue afterwards.

6.5.2 The Zimbabwe National Craft Certificate

Modelled along the St. Peter VTC courses, the Zimbabwe National Craft Certificate (ZNCC) was introduced as a pilot scheme for a select group of pupils in forms three and four. Syllabuses were to be provided by the Ministry of Higher Education, who also examined and certificated the ZNCC pupils. The ZNCC was originally offered as a full-time, post-school course at polytechnics. It was the basic examination taken by indentured craft apprentices as part of their training. At polytechnics the course was offered in four stages. Pupils doing the ZNCC courses were expected to cover the first stage alongside their 'O' levels so that those who proceeded for apprenticeship training would commence at the second stage.

Although the ZNCC was designed as a full-time course for post-school training, no amendments were made to the syllabuses to suit school situations. Pupils were required to take six to eight other subjects as part of their 'O' level studies (including one other technical subject), within the normal school timetable. They were however required to spend between 14 and 16 periods per week (approximately 35 to 40 per cent of the timetable), doing the ZNCC and the 'O' level technical subjects. Considering that other school subjects were allocated between four and seven periods per week, the combined time allocation for technical and vocational subjects appeared generous. The 'O' level

technical subject on its own required a minimum of five periods per week, leaving therefore between nine and eleven periods for the ZNCC. However, this time was inadequate for a course normally taken by full-time apprentices and this is one of the main reasons cited for the high failure rate of the first group of the ZNCC pupils who sat their examinations in 1989.

Schools to pilot the scheme were recommended by the Task Force and approved by the Higher Education Industrial Training Board (HEITB) as having adequate workshop facilities and suitably qualified and experienced teachers. The schools had to be already offering relevant technical / vocational subjects at 'O' level. The criteria used to select schools meant that most of the pilot schools were in urban areas. Out of a total of twenty-eight schools offering ZNCC courses in 1990, twenty-two of these were urban and only six were rural. Fourteen of the twenty-two urban schools were in the two major cities of Harare and Bulawayo and eleven of these were former 'white' (group A) schools. Since no capital expenditure was provided for the programme, it meant therefore that most rural schools were excluded from the new initiative. While previous vocationalisation programmes had been rebuked for targeting less advantaged schools and therefore pupils from lower socioeconomic backgrounds, the ZNCC could be challenged for excluding such schools and pupils. The implications of educational provision that tend to promote social class disparities were discussed in Chapter 4. In an interview during the fieldwork survey for the current study, one member of the Task Force commented that:

...these [schools] were not distributed equally in the country, which caused some concern to other people. ...we chose only those schools that had more equipment

and most of these schools happened to be in major towns like Harare and Bulawayo, very few in Mutare and one or two in Masvingo.

In order to qualify for the programme, schools had to have machines and tools that were in reasonable working order and teachers who had the Journeyman Class One qualification or a Bachelor of Education (B.Ed.) degree in a technical area. Certificates awarded by Belvedere Teachers College were considered to be inadequate since it was argued that the time allocated for practical training was too short and graduates were therefore insufficiently skilled. As one of the senior officials involved in the initial selection of teachers for the pilot scheme pointed out:

Suitable teachers were not many because we were looking for teachers who had trained at Mlezu and Gweru Teachers Colleges where they had more thorough skills training. We were not happy with the teachers who were trained at Belvedere Teachers College because of the nature of their training.

His main criticism of the teachers trained at the college was that they combined an academic and a technical subject in their training and spent only two of their four-year training period in college. They spent the first year in college and the second year doing their teaching practice then came back to college for the third year and the final year out in the field again. They did not therefore get sufficient time to acquire workshop skills in their respective technical areas before they were deployed into the field. Also, when they were out for teaching practice, many of them tended to teach academic rather than technical subjects. This was partly because most rural schools where these teachers were deployed for their teaching practice did not offer technical subjects. The other reason was that since they majored in one academic and one technical subject, some of the student teachers preferred to teach academic rather than the technical subjects which

they regarded as 'less prestigious'.

Most schools recommended by the Ministry of Education (MOE) to pilot the scheme were rejected as inadequately equipped or staffed by the Inspectorate Team from the MLMPSW. The size of machinery and the fact that teachers had not been trade-tested and did not have industrial certificates were the main reasons why schools were rejected. The other problem seemed to arise from the different perceptions held by the relevant officers in the two ministries regarding the nature of the new programme and what they expected of the schools. This meant that while MOE tended to be more lenient due to their perception of the realities of situations in schools, MLMPSW tended to regard the existing skills and equipment in industries as the standard that could not be compromised. This was exacerbated by the apparent lack of communication between the relevant officers in the two Ministries. Responding to questions from Regional Directors, during a meeting to explain the criteria used to select schools, one Task Force member lamented:

Our attempts to try and liaise with "Manpower" have been full of "pot-holes". It was only yesterday (12/5/87) that we were able to meet their representatives for the first time in three years. The meeting was informal....

Initially, the subjects offered included Bricklaying / Blocklaying, Carpentry and Joinery, Machine Shop Engineering and Motor Mechanics. Other subjects such as Textile Design and Textile Technology, Typing and Catering were introduced later. Schools to pilot the ZNCC were identified in phases so that those which were ready could start implementing the programme immediately. There was no limit regarding the number of

schools that could pilot the scheme since any school that met the stipulated criteria could take part. However, only a few schools could meet the requirements initially stipulated. The criteria was later relaxed slightly after it was realised that the scheme would not get off the ground since no schools could match the machinery and equipment in industry. By the end of 1987, thirteen out of the 1600 secondary schools in the country had been selected to pilot the scheme. In 1988 there were 28 pilot schools offering courses leading to the ZNCC (Ministry of Education and Culture, 1990). Table 2 shows the distribution of the twenty eight pilot schools operating in 1988 according to type and the subjects offered:

Table 2: Distribution of the original pilot schools by type and subject offered

SUBJECT	TYPE OF SCHOOL			
	GOVT	NON-GOVT	ZIMFEP	TOTAL
1. Brick / Blocklaying	0	9	2	11
2. Cabinet Making	9	4	0	13
3. Machine Shop Engineering	3	0	0	3
4. Motor Mechanics	0	1	0	1
TOTALS	12	14	2	28

Adapted from: Ministry of Education and Culture unpublished data, 1989

The selected ZNCC teachers and respective Education Officers (EOs) spent one to two weeks following in-service training courses designed to familiarise them with the requirements of the pilot scheme and provide them with some industrial experience. According to the Ministry of Education and Culture (1990), twenty-two teachers and Education Officers completed courses to upgrade their skills in Pattern Making,

Designing and Tailoring at Speciss College in Harare in preparation for the introduction of Textile Technology in January 1991. Ten Home Economics teachers and officers from the Curriculum Development Unit (CDU) attended two workshops in Catering, organised by the Hotel Industry Association. Twenty-one Metalwork teachers completed a two-week course in welding at one of the leading industrial companies. Twenty-four teachers and Education Officers were attached to construction companies involved in Joinery and Bricklaying / Blocklaying for a period of two weeks. Education Officers responsible for Agriculture and teachers were attached to establishments involved in commercial and decorative horticulture. All the teachers who were interviewed in the current survey thought the industrial attachments were very worthwhile and wished the periods had been extended or such opportunities offered more frequently.

Pupils selected for the programme took a specialised vocational subject leading to the ZNCC. Officially, they were to be selected on the basis of their superior performance and interest in their respective practical subjects. The actual selection of pupils for this programme was however, left to individual schools. In some schools, pupils whose academic ability was lower were selected, but generally only pupils who had attained relatively high results during the mid-year or end of year examinations in Form two and who had high grades in their technical subjects, did the ZNCC course.

When the first ZNCC examinations were sat in 1989, the failure rate was exceedingly high throughout the country. 115 candidates from eleven schools sat the examination in November 1989. Only nine passed and all of them were from Allan Wilson technical high school which recorded a 60 per cent pass rate (Ministry of Education and Culture,

1990). The success of Allan Wilson was probably due to its long tradition as a reputable technical school for white children. It had exceptionally good facilities and qualified teachers compared to the other pilot schools. Several reasons were ascribed to the high failure rate at the other schools. The syllabus was believed to be too demanding for pupils doing several other 'O' level subjects since it was originally designed as a full-time post-school course. Also, pupils who sat the first examination studied the course for four instead of the stipulated six terms. The first group of schools were authorised to start the ZNCC programme in the third term, instead of the first term of 1988 as originally scheduled. It was noted that the majority of candidates who failed the ZNCC obtained good grades in related technical subjects at 'O' level. Since the pupils were mainly selected on the basis of their superior results at the Zimbabwe Junior Certificate (ZJC), most of them had good overall results and qualified for 'A' level studies. The government decided that from 1990, the ZNCC would be replaced with the National Foundation Certificate (NFC). This was adopted from vocational training colleges, where it was offered as a foundation course for first-year apprentices and was less demanding than the ZNCC.

6.5.3 The National Foundation Certificate

The National Foundation Certificate (NFC) was introduced to replace the ZNCC because too many pupils had failed the examination and it was therefore felt that its content was too demanding. The NFC courses were therefore less demanding. The change from ZNCC to NFC was made on the basis of the unsatisfactory examination results, without a full evaluation of other possible factors that could have influenced the programme. All the pilot schools, including Allan Wilson which had 60 per cent ZNCC passes were

directed to discontinue the ZNCC programme. The change seemed to be based on an intuitive assumption that only the content of the ZNCC was the problem. The NFC therefore adopted most features of the old scheme using the same schools and teachers who had been involved in the ZNCC.

The first NFC examinations were undertaken in 1991 and most schools recorded a pass rate of over 90 per cent. Two major reasons were cited for the improvement in the examination results. The main one being that the NFC was less demanding than the ZNCC. The other reason was that unlike the former programme where pupils had to pass all papers, the NFC accepted an aggregate mark of 50 per cent or more as a pass. The question arises however, whether the change to the 'simpler' NFC course did not contradict the original objective of providing skills that were comparable to those provided in post-school institutions and required for employment. In response to this question, one of the original members of the Task Force explained that while the ZNCC had stronger vocational goals, the NFC was less ambitious, even though relevance to the world of work was still regarded as crucial. As discussed in chapter 3, critics have questioned whether school-based vocational education which does not stress the provision of work-related skills is vocational at all.

6.5.4 Status of the ZNCC / NFC courses

Although the ZNCC and NFC were offered alongside the traditional 'O' level subjects, they were not accepted as equivalent qualifications. A pass in the ZNCC course was not recognised as being equivalent to an 'O' level pass. Pupils who passed four 'O' level subjects and a ZNCC course were not regarded as having the five passes required for

further education or selection for training. This appeared to contradict the emphasis that was attached to the vocationalisation programme and the claims echoed since the introduction of the new Structure and Content of Education in 1986, that technical and vocational subjects were to be accorded equal status. According to the original plan, the ZNCC was a post-school course and was therefore higher than the 'O' level courses. The Task Force announced in its annual report at the end of 1988 that an agreement had been reached between FEEB and the Ministry of Education to use the Cambridge 'O' level syllabus as a core for the ZNCC course and that aspects of the ZNCC that were not covered in the 'O' level syllabus would be regarded as options. This implied therefore that the ZNCC was to cover the content requirements of the 'O' level syllabus before delving into further areas, confirming its claimed status as a higher qualification. It was therefore ironic that in practice the 'O' level syllabus continued to be regarded as a superior qualification.

From 1992 however, a National Foundation Certificate (NFC) pass was to be accepted as equivalent to an 'O' level pass. A Chief Education Officer (CEO) Circular Minute from the Ministry of Education and Culture stipulated that:

A pass at National Foundation Certificate (NFC) level in a single subject is considered to be at par with a pass at G.C.E. ordinary level at C or better in a relevant subject. In addition, for an institution (e.g. a Polytechnic) offering 'National Certificate (NC) level courses, priority for admission is given to NFC holders in relevant subjects for particular courses. (CEO Circular Minute No. 3 of 1993¹, p. 1)

¹ Although it was issued as CEO Circular Minute No. 3 of 1993, the Minute was actually dated 12 January 1992 and issued the same year.

The Minute invited schools wishing to offer NFC courses to obtain the relevant syllabuses from the Ministry. It provided a list of courses which schools could choose from areas such as Commerce, Home Economics, Technical Graphics, Mechanical Engineering, Woodwork, Building, and Science Technology. Schools electing to implement the courses were to provide the necessary facilities and equipment. Although no formal evaluation had been carried out by May 1993, this Minute seems to mark the end of the pilot stage of the vocationalisation programme. Sheet 6:1 (p. 246) shows the current structure of the education and training system in Zimbabwe as surveyed by the World Bank in Colclough et al (1990). The NFC is not included in the structure but as explained earlier, it is offered alongside the 'O' level studies in years 3 and 4 of the lower secondary education. Appendix 6 shows how the new structure of secondary education is intended to link with further and higher education and training and lead to employment at various stages.

6.6 Current policy on the vocationalisation scheme

The ZNCC was introduced to provide pupils with skills which were considered to be relevant for the labour market. It was hoped that this would enable them to enter into direct employment or have their post-school vocational training periods reduced. Although self-employment was also considered as an objective of the ZNCC, particular emphasis was placed on making it relevant to the formal employment sector. The cooperation of parastatal bodies, commerce and industry (the private sector), in providing pupils and teachers with work experience was considered crucial to the success of the scheme.

The ZNCC pilot scheme was intended to provide a model for the 'technical high schools' that the government of Zimbabwe (GOZ) intended to provide at both provincial and later district levels. These were to offer an alternative route for pupils wishing to pursue technical courses at tertiary or university level. According to this plan, pupils completing their 'O' levels would have the opportunity of either doing 'A' levels, or vocational courses at technical training colleges. By starting with a few well equipped schools to pilot the scheme, it was hoped that these would succeed with minimum financial input from government.

The current status of the NFC vocationalisation scheme is not clear. A recent survey showed that in comparison to the 1992 figures, the candidates who were going to sit for the NFC examinations in November 1993 were going to be much less. In Harare, out of the six schools that entered candidates for the 1992 examinations, four had since discontinued the course. One of the two remaining schools was offering the NFC course as an optional extra-curricula activity and was unlikely to enter pupils for examinations. However, two new schools in Harare started offering the NFC in Catering and Textile Design and Textile Technology in 1993. In Mashonaland East, the original two schools had since introduced new courses in 'Catering' and a third school was offering courses leading to the NFC in 'Cabinet Making' and 'Textile Technology and Textile Design'.

6.7 Summary and conclusions

This chapter examined the political and socioeconomic factors that influenced recent attempts to vocationalise secondary education in Zimbabwe. The vocationalisation policy arose from government attempts to transform the education system and make it

responsive to the political, economic and social needs of the new state. Although colonial education appeared to emphasise vocational education for Africans, such provision was limited to basic craft skills that would not make them highly skilled. The colonial economic system had relied on the skills of the white minority population and foreign white expatriates while preventing the black people from becoming highly skilled. At independence therefore, the new government found it necessary to redress such anomalies and enable more people to participate in the formal sector of the economy.

Post-independence vocationalisation policy was also perceived along ideological lines. The new government sought to establish a new socioeconomic system based on socialist principles. The ideological imperatives of the new vocationalism were particularly evident in the concept of Education With Production (EWP) which was to guide educational thinking. Although the Zimbabwe Foundation for Education With Production (ZIMFEP) schools which piloted the EWP concept were largely unsuccessful, post-independence education policies continue to emphasise the need to link theory to practice. Vocationalising school curricula was not only a response to manpower shortages in skilled areas, but was intended to provide prevocational skills to the increasing number of pupils going through the school system. Since most of them left formal schooling at the end of their secondary education, it was thought prudent to provide work-related skills at this level.

The main imperatives behind the introduction of the ZNCC and the NFC arise from the political, economical and social demands following the attainment of political

independence. These objectives confirm the belief in human capital that continues to influence educational thinking. Both the ZNCC and the NFC pilot schemes seem to be based on the perceived requirements of the formal employment sector. This is confirmed by the emphasis in both schemes to involve industry in drawing up the curriculum, providing work-experience and accreditation of vocational graduates. The overriding concern of the ZNCC and NFC schemes was to improve the prospects of vocational graduates on the labour market. More emphasis was therefore put on practical rather than theoretical work.

Although such vocational education might meet the requirements of pupils joining industry or taking up technical training upon leaving school, its appropriateness for those wishing to proceed to university is not immediately apparent. Given that most of the pupils following the NFC courses were selected on the basis of their superior ability, they are likely to continue into higher or further education rather than seek employment soon after their secondary education. This does not contradict the broad goals of the vocationalisation policy according to the 1986 Education Plan. However, the emphasis on practical rather than theoretical work, the importance attached to industrial-experience and the stress given to the involvement of the formal employment sector all signify the view that NFC pupils were expected to join industry rather than proceed to university. Paradoxically however, the fact that more able pupils were selected for the programme suggests that the NFC does not seem to be intended as an inferior education for pupils unlikely to qualify for further studies. Since they were still doing the core academic subjects such as English, Mathematics and Science, pupils could still proceed to higher education. It seems therefore that the NFC offered a technical / vocational option for

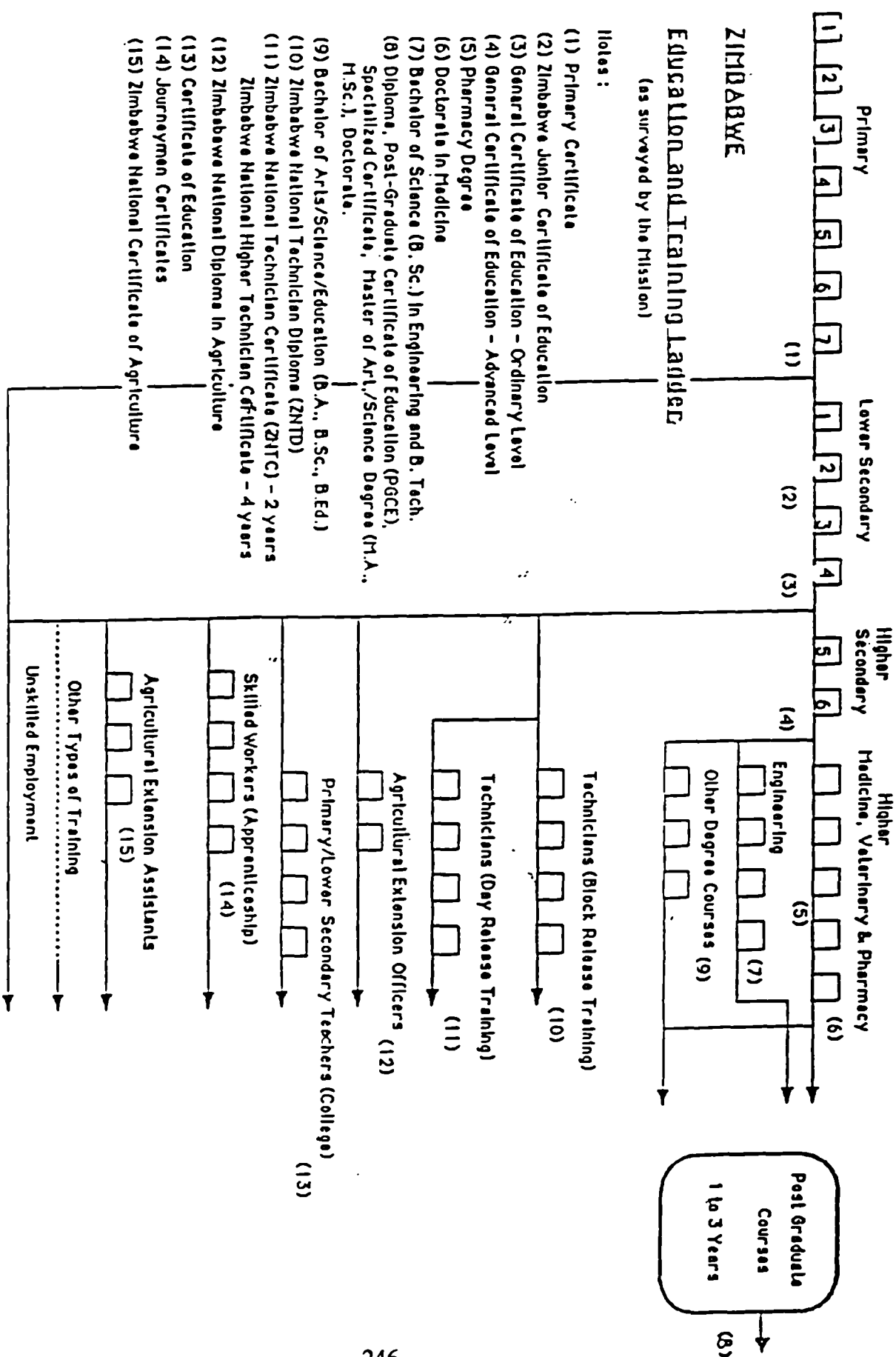
pupils who might have successfully pursued an academic line. It excluded the majority of pupils who were likely to seek employment soon after their 'O' levels, particularly those with lower academic ability.

Although it could be argued that even pupils proceeding to university need industrial experience, a content that is limited to specific work-related skills as seemed to be the case with the NFC, does not appear to be an appropriate preparation for the advanced work pupils enrolling for engineering, architectural and similar fields are likely to require. Even for those joining the industrial sector for employment or training upon leaving school, specific skills tend to be short-lived due to rapid technological changes and they limit the vocational choices of pupils. There seems to be a misconception about the specificity of technical and vocational skills which schools should impart as a pre-vocational preparation. It is not the specific skills or use of specific machines that pupils need, but an understanding of the underlying principles.

In introducing the ZNCC and NFC pilot schemes deliberate attempts were made to avoid problems normally associated with school-based vocational education. For instance, the course was offered in form three, after two years in which all pupils followed a similar curriculum comprising of both academic and vocational subjects. Also, only pupils who had attained higher grades in relevant vocational subjects and were interested, were included in the pilot scheme. The importance given to work-experience for both pupils and teachers and even EOs, the involvement of industry in approving courses and accreditation, and the emphasis on the acquisition of practical workshop skills are all indications of how the vocationalisation scheme attempted to avoid the vocational

'fallacy'. Whether these 'improvements' were effective or not does not only depend on policy but the perceptions of the officers and teachers involved in the implementation of the scheme and even more importantly, the pupils for whom the scheme was intended. It is necessary to examine how pupils and teachers perceived the programme, before discussing whether or not these initiatives confirm the arguments supporting the 'vocational school fallacy'. The next chapter analyses the fieldwork data from the survey conducted at pilot schools in Harare and Mashonaland East provinces to investigate the perceptions of EOs, teachers and pupils regarding the ZNCC and NFC schemes.

Sheet 6.1: The education and training system in Zimbabwe



Source: The World Bank

Chapter 7: The Zimbabwe National Craft Certificate and the National Foundation Certificate Pilot Schemes - A fieldwork investigation

7.1 Introduction

The current study investigates the extent to which recent attempts to vocationalise secondary education in Zimbabwe confirm the 'vocational fallacy' depicted in international literature. According to the 'fallacy', in spite of its relatively high costs, schools-based vocational education does not meet the requirements of industry, the expectations of policy-makers, pupils and parents. Schools should therefore concentrate on academic subjects and leave the provision of technical and vocational skills to the workplace. Critics argue that such education will not boost economic development, alleviate unemployment or shape pupils' aspirations along vocational lines. Foster (1965a) asserts that pupils' educational and career aspirations are influenced by the nature of the formal employment sector which favours academic rather than technical and vocational qualifications. According to the vocational fallacy, pupils' aspirations are determined largely by their perception of opportunities within the formal sector of the economy rather than by the type of education they are exposed to. Most of the views pursued in the current chapter are contained in Psacharopoulos' (1991) assertion cited in section 3.3.1(b), that the main reason why vocationalisation of secondary education fails to meet its intended goals is:

because students forced into the technical vocational stream would never choose, let alone accept, to enter a manual occupation. Education is being seen by all

families, ...as a way into a modern job in the city. When the general education stream is closed for the sake of 'stopping the one-way street from the secondary to university... the inherent dynamics of behavioural choice by students and their parents is ignored. (p.194)

He postulates that because they are forced into the vocational stream, such students seek ways of escaping and be admitted to university. The views that pupils are forced into vocational tracks, that vocational education is intended to prepare them for manual occupations and prevent them from proceeding to university reflect the premises on which the vocational fallacy is based. It is argued in the current study that while such vocational provision characterised colonial policies, its provision in post-colonial countries like Zimbabwe is associated more with human capital rather than social reproduction considerations discussed in chapter 4. It is not intended to lower pupils' educational and career aspirations but to help create a skilled workforce to democratise production systems and participation in economic activities.

The current chapter investigates empirically the issues emanating from the vocational fallacy regarding the perceptions of pupils in relation to theoretical arguments discussed in chapter 4 and the goals of the vocationalisation policy in Zimbabwe. Educational sociologists argue that vocational education is provided to pupils from lower socioeconomic backgrounds to keep them out of contention for viable employment opportunities. The current chapter examines this proposition in relation to pupils taking the NFC courses as reported in section 7.2.1. It is argued in the present study that the 'vocational fallacy' is based on several premises which need to be investigated in relation to specific circumstances. The main arguments emerging from the vocationalisation debate were listed in section 3.8. Those pursued in the current chapter

are as follows:

1. Pupils and parents reject vocational education and prefer academic which they perceive to lead to more labour market opportunities and financial rewards.
2. Vocational education does not reduce pupils' desire to proceed to higher education.
3. Vocational education does not orient pupils towards manual occupations.
4. Schools lack the necessary equipment, resources and suitably qualified and experienced teachers to provide skills that meet the requirements of industry.

It was pointed out in chapters 1 and 3 that the connotations of school-based vocational education differ in relation to particular contexts and the purposes it is intended to serve. Most of the controversy surrounding the vocational fallacy seems to arise from the conflicting perceptions regarding vocational education and its intended goals. While it was intended to inhibit the academic and professional progress of the indigenous people by the colonialists, post-independent states see it as a means to promote the integration of the indigenous people into the production system. While some vocational education programmes are rejected by both pupils and parents alike who perceive its limited opportunities, in situations where it is seen to lead to lucrative post-school opportunities, it is readily accepted. Increasing literature seems to give the impression that the vocational fallacy is a truism. However, as McMahon (1988) states, under certain circumstances the benefits of vocational education outweigh the shortcomings while under other circumstances this is not the case. What remains unresolved is the question of under what circumstances vocational education is viable. Specific circumstances need to be considered individually in relation to their prevailing socioeconomic and political

contexts as discussed in chapter 4.

Chapter 6 examined the imperatives and policy considerations underlying the current vocationalisation policy and the introduction of the ZNCC and NFC pilot schemes in Zimbabwe. Previous attempts to provide vocational education based on economic, political or ideological considerations without taking into account how the implementers (teachers and subject EOs) and the users (pupils) perceive such education have been unsuccessful. The current chapter examines how the schemes were perceived at school level by the pupils and teachers and at provincial office level by the Education Officers (EOs). It examines the relationship between pupils' background characteristics, educational and career aspirations and their views towards vocational education. Pupils responses are analysed in relation to the overall goals of the vocationalisation policy in Zimbabwe and the main arguments surrounding the provision of school-based vocational education internationally.

7.2 Issues addressed by the fieldwork data

The arguments that have emerged from the vocationalisation debate are numerous and varied even though they have not moved beyond the initial propositions postulated by Foster (1965a and b) as discussed in chapter 3. It is neither necessary nor the purpose of the current study to investigate all the issues that have emerged from the vocational fallacy. Chapter 4 discussed how most of the issues surrounding the provision of school-based vocational education are related to broader socioeconomic and political factors and should not therefore be investigated in isolation. It is also premised in the current study that educational provision cannot be explained entirely through the broader

socioeconomic and political 'macro' factors without taking into account the 'micro' factors at school level. The present chapter investigates the vocational fallacy in relation to the following issues:

1. The socioeconomic background characteristics of pupils taking the NFC courses.
2. The educational and career aspirations of pupils taking the NFC courses.
 - (a) Educational aspirations of NFC pupils;
 - (b) Career aspirations of NFC pupils;
 - (c) Relationship between the NFC courses taken by pupils and their perceived chances of securing employment;
 - (d) Relationship between the educational levels pupils wanted to reach and their perception of the qualifications required for the occupations they aspired to;
 - (e) Relationship between pupils' career aspirations and what they perceived to be the expectations of their parents;
 - (f) Relationship between pupils' subject preferences and their career choices;
 - (g) Perceptions of pupils regarding how they were selected for the NFC courses;
3. Perceptions of pupils in relation to the NFC courses;
 - (a) The criteria pupils thought ~~were~~ used in their selection for the NFC courses;
 - (b) How useful pupils thought the NFC was in relation to its intended goals.
4. Issues related to teachers and the provision of the NFC.
 - (a) Qualifications and experience of teachers and their implications for the NFC;
 - (b) Teacher mobility as a factor in the provision of the NFC
 - (c) Status of the NFC teachers within the schools;
 - (d) Time available to teachers for the NFC courses;
 - (e) Perceptions of teachers regarding the NFC pilot scheme.
5. Perceptions of the EOs regarding the ZNCC and NFC pilot schemes.

7.2.1 Background characteristics of pupils taking the NFC courses

It is suggested in the sociological views discussed in chapter 4 (section 4.4) that pupils are divided into vocational and academic streams in accordance with the capitalist division of labour which reinforces social-class stratification. According to this line of thought, pupils follow different tracks on the basis of their background characteristics. Vocational education is offered to children from working-class families thereby keeping them as a social underclass. The provision of vocational education based on pupils' socioeconomic background means that SES rather than the curriculum followed determines labour market outcomes. This view is based on a notion of vocational education that is limited to basic craft skills that prepare them as semi-skilled workers.

The sociological views and vocational fallacy discussed in chapter 3 do not seem to take into account the fact that vocational education is perceived differently and is provided for different purposes depending on the prevailing socioeconomic and political circumstances. It is the contention of the current study that the perceptions and intended goals of school-based vocational education are related to the selection of pupils for such education. A frequent criticism in the vocational fallacy is that school-based vocational education fails to prevent pupils from aspiring to higher education and higher professional jobs and orient them towards manual occupations. These views conflict with the goals enunciated for the current vocationalisation policy in Zimbabwe. According to the 1986 Education Plan discussed in chapter 6 and the envisaged structure for education and training, vocational education is intended for both able and less able pupils, depending on their interest and whether they are inclined towards such subjects in their school performance. Its main goals include the provision of relevant vocational

skills for pupils wishing to pursue advanced training in vocational areas even at university level and to prepare pupils for employment in both the formal and informal sectors of the economy. This is a departure from the colonial practice in which such education was intended to limit the educational and career progress of African children. However, colonial policies still stated 'labour market relevance' as the main goal of vocational education.

Background characteristics such as age, sex, socioeconomic status and innate ability tend to influence pupils' educational and career choices and prospects. According to the literature review in chapter 3, vocational education tends to 'attract' pupils from lower socioeconomic backgrounds (Psacharopoulos and Loxley, 1985; Lauglo and Lillis, 1988). Their parents are believed to have lower academic qualifications than those of pupils in academic tracks and most of the parents are engaged in manual occupations. These views give the impression that lower socioeconomic status (SES) pupils or their parents choose vocational education while higher SES pupils prefer academic. This is not necessarily the case since the acceptance or rejection of vocational education depends on its perceived outcomes. Pupils from lower socioeconomic backgrounds only tend to be over-represented in vocational tracks as a result of the educational opportunities made available to them rather than their free choice. This tends to be the case when it is limited to basic craft skills and is mainly meant for social control rather than improving the post-school opportunities of pupils. Evidence from Kenya (Lauglo, 1985) or the SENAI in Brazil (Lillis and Hogan, 1985; Lauglo and Lillis, 1988) has shown that vocational education also tends to be dominated by pupils from more affluent socioeconomic backgrounds when it is associated with more opportunities and is

provided in the more elite schools.

In post-colonial developing countries like Zimbabwe, the largest proportion of formal sector employment is in skilled and semi-skilled occupations. As pointed out in chapter 4, apprenticed journeymen in Zimbabwe have higher salaries than most white-collar employees, due to the scarcity of skilled personnel and the forces of supply and demand. In such a situation, vocational education does not necessarily lead to less lucrative employment opportunities. However, pupils from the vocational F2 secondary schools discussed in chapter 2 were deliberately prevented from joining apprenticeship schemes. Their academic subjects were 'watered down' particularly in Mathematics and Science to ensure that they would not proceed to higher education or be accepted for apprenticeship training. While policy statements do not necessarily reflect what purposes vocational education is intended to serve, its provision to pupils of lower academic ability or from lower socioeconomic backgrounds tends to be associated with less post-school opportunities. Both parents and pupils in developed and developing countries have resented such education. It is argued in the current study that this was the main reason why vocational education was persistently rejected in colonial states.

Fieldwork data were collected to investigate the background characteristics of pupils taking the NFC courses, taking into account the socioeconomic and political context of Zimbabwe. It was found that approximately 62 per cent of the pupils doing the NFC course in 1993 lived with both parents. The next largest group, of 19 per cent, lived with their mother only, while eight per cent stayed with an elder brother or sister and two per cent stayed with their fathers. Eight per cent of the pupils did not respond to

this question. About 38 per cent of the pupils had their school fees paid by both parents, while 37 per cent indicated the fees were paid by their fathers and 12 per cent by mothers. Only three per cent of the pupils had their fees paid by guardians, who were neither their brothers nor sisters. Over 78 per cent of the pupils stayed either in large cities or small towns during most of their school holidays, compared with 18 per cent who stayed in rural areas and only one per cent on a commercial farm. The other three per cent did not respond to the question. Pupils' responses to the question regarding where they had attended their primary education showed that most of them had been in urban areas throughout their schooling. Approximately 96 per cent had attended the same secondary school while only just over three per cent had transferred from other schools and the other one per cent did not respond to the question. Appendix 3 shows the full statistical summaries of pupils' responses to these variables.

Over 49 per cent of the fathers and 42 per cent of the mothers had reached 'O' level in their education. Approximately 13 per cent of the fathers and five per cent of the mothers had gone beyond 'O' level. The **no-response** category includes pupils who stayed with guardians. Some of the pupils whose parents or guardians had lower than secondary education might also fall under this category since such pupils tend to think it is embarrassing to state that their parents did not attain higher levels of education. Table 3 shows the distribution of parents by academic qualifications.

Table 3: Academic qualifications of the parents of NFC pupils

Value Label		Fathers		Mothers	
		Count	Percent	Count	Percent
0	No response	19	10.6	8	4.4
1	Primary education	21	11.7	39	21.7
2	Zimbabwe Junior Cert.	27	15.0	50	27.8
3	'O' Level	89	49.4	75	41.7
4.	'A' Level	15	8.3	7	3.9
5	Degree	9	5.0	1	0.6
TOTAL		180	100.0	180	100.0

Over 78 per cent of the fathers, compared to 51 per cent of the mothers, were in one or other form of employment. The categories of occupations were derived from pupils' responses to the question "What does your father / mother do for a living?" Pupils were specifically asked to indicate parents who were engaged in peasant farming rather than stating them as unemployed. The concept 'unemployed' generally has a different connotation in situations where the majority of the population survives on peasant farming. Although they are not in formal employment, peasant farmers earn a living through the sale of their crops and they are usually self-sufficient. The category 'peasant farmer' however is rather too inclusive. On the one hand are those who get substantial earnings from the land, whose returns equal or even exceed the wages paid in formal sector employment. Then there are those peasant farmers who largely depend on earnings from family members working in formal employment sectors.

Colclough et. al. (1990, p. 23) report from the 1986-87 Labour Force Survey (LFS) that in 1987, over 1.2 million people in Zimbabwe were employed while almost 1.8 million

were communal farmers and 234,000 were unemployed. These figures represent 38 per cent, 55 per cent and 7 per cent respectively of the labour-force (comprising the population aged between 15 and 65 years). According to these statistics, approximately one third of the labour force was in formal sector employment, one quarter of whom were working in the agricultural sector. The figures based on the First Five Year Development Plan (Table 1, chapter 6) show that the projected formal sector employment for 1990 was nearly 1.2 million people, most of them in agriculture, mining and manufacturing. The national employment pattern provides the context in which the findings of the current study can be understood.

From the sample of NFC pupils included in the present study, the largest single category of fathers, (over 17 per cent) were technicians or worked in related trades, while approximately 14 per cent were self-employed and over 13 per cent occupied managerial positions. Only one father (less than 1 %) was reported unemployed and five per cent were peasant farmers. The largest group of mothers (approximately 31 %) was self-employed. These mothers were mainly engaged in cross-border buying and selling, an activity that has become popular since the mid-1980s when consumer goods, particularly electrical and clothing became scarce and too expensive. People go to neighbouring countries to order these items and sell them at lucrative profits. Like peasant farmers, this group of self-employed parents does not get regular incomes and could therefore be regarded as unemployed. Some of them however have become prosperous entrepreneurs, while others do not earn enough to make it their only means of livelihood. Table 4 shows the occupations of the parents whose children were doing the NFC courses.

Table 4: Occupations of the parents of NFC pupils

Value label	Father		Mother	
	Count	Percent	Count	Percent
1. No response	29	16.1	30	16.7
2. Businessperson/Self-employ.	25	13.9	56	31.1
3. Manager/Director	24	13.3	2	1.1
4. Salesperson	5	2.8	6	3.3
5. Teacher/Headmaster	16	8.9	10	5.6
6. Technician/Technical	31	17.2	4	2.2
7. Clerical/Secretarial	15	8.3	7	3.9
8. Commercial farmer	1	0.6	0	0.0
9. General worker	22	12.2	3	1.7
10. Unemployed	1	0.6	32	17.8
11. Peasant farmer	9	5.0	26	14.4
12. Nurse	0	0.0	2	1.1
13. Tailor	2	1.1	2	1.1
Total	180	100.0	180	100.0

The sample of pupils included in the current study does not bear characteristics that are typical of pupils in secondary schools nationally, but resembles pupils following the NFC pilot scheme. The majority of the NFC pupils were in urban areas where most of the pilot schools were located. This was because the schools piloting the NFC vocationalisation scheme were selected on the basis of their relatively superior resources and equipment. This resulted in 22 out of the 28 original pilot schools being urban. With the exception of the government rural day secondary and church schools, rural schools are generally under-resourced and poorly equipped.

Most parents prefer to send their children to either urban schools or rural boarding schools. Classifying pupils as urban or rural is inaccurate since some of them might be

rural pupils attending schools in urban areas. It is common practice for pupils to go and stay with relatives in urban areas so that they can attend schools that have better facilities. Such pupils tend to go back to the rural areas during school holidays. In response to the question, "Where do you usually stay during the school holidays?" over 78 per cent of the pupils responded that they stayed in urban areas, most of them in large cities while 18 per cent indicated rural areas. Only less than one per cent stayed on a commercial farm and the remaining three percent did not respond to the question. It can be concluded therefore, that the majority of pupils in this study lived in urban areas since pupils tend to spend most of their school holidays with their families.

The background characteristics of pupils selected for vocational courses tend to reflect the purposes such education is intended to serve. Programmes intended to prepare pupils for lower level occupations tend to be offered to pupils from lower socioeconomic backgrounds. Vocational education is generally associated with pupils who are less able academically and come from lower socioeconomic backgrounds. The pupils in this study were mainly urban and came from relatively high socioeconomic backgrounds. Several factors indicate this to be the case. The academic levels reached by their parents and the fact that most of these parents were employed, is one indication. Over 66 per cent of the fathers and 49 per cent of the mothers were in clerical jobs or higher and most of them resided in urban areas.

At all the schools included in the current study, pupils following the NFC courses were either in the top or second top of six streams or more at their schools. They were selected after their ZJC on the basis of their superior examination performance generally,

but particularly in the relevant technical subjects. Almost all the pupils did General Science, Mathematics and approximately 50 per cent did Physics and Chemistry. In Zimbabwe, these subjects have traditionally been offered almost exclusively to pupils in academic streams. Pupils in vocational streams were regarded incapable of doing scientific subjects and were offered craft subjects instead. However, apprenticeship training preferred pupils who had done Mathematics and Science. Pupils from academic rather than those from vocational streams were therefore selected. Also, the level of training required pupils of higher academic ability, giving a further advantage to pupils from academic tracks. The decision that pupils in vocational areas do not take Science and Mathematics is consistent with the view that vocational pupils should be prepared for semi- rather than highly skilled occupations.

Pupils' own perceptions of particular educational programmes has an influence on whether or not they accept such programmes. For instance they are unlikely to readily accept programmes which they see as intended specifically for those in lower streams who are regarded as academically less able. In response to the question, "What do you think was the main consideration in the selection of pupils for the NFC?", 80 per cent of the pupils thought it was either 'best mid-year / ZJC results' or 'interest in NFC'. This concurs with responses from teachers who mentioned 'best ZJC results' and 'interest in the NFC', as the main criteria used to select pupils for the pilot scheme. Since only a few pupils from each school were selected for the course, it was possible to take pupils' interest into account without complicating the timetables. In Zimbabwe generally, pupils and parents have little choice in what subjects they study once they get to a school since this choice is a prerogative of the teachers. A series of questions asked

to find out pupils' views towards vocational subjects generally and the NFC in particular shows that pupils were highly positive towards the subjects and the programme. Appendix 4 shows pupils responses with regard to attitude towards vocationally oriented subjects, occupations and the NFC course.

7.2.2 Educational and career aspirations of pupils taking the NFC

(a) Educational aspirations of NFC pupils

One of the vocational fallacy arguments is that school-based vocational education fails to lower the aspirations of pupils and limit the number proceeding to higher education. Vocational pupils are expected to seek employment upon leaving secondary schooling, irrespective of whether or not opportunities exist. The aspirations of most pupils in the current study were found to contradict this objective and confirm this element of the vocational fallacy. Most pupils aspired to university education although mainly in technically-related areas. As discussed in chapter 6, according the 1986 Education Plan in Zimbabwe high academic aspirations do not contradict the goals of vocational education. According to the literature review in chapter 3, pupils prefer academic education and only accept vocational education as a last resort (Foster, 1965; Psacharopoulos and Loxley, 1985; Lauglo and Lillis, 1988). Pupils who end up in vocational tracks are believed to use it as a way of seeking opportunities in academic areas of higher education or employment. Critics of school-based vocational education postulate that the courses of study pupils follow in school have no effect in shaping their career choices since both vocational and academic pupils continue to aspire to higher education and high status jobs. However, they also acknowledge that in situations where prospects are perceived to exist in vocational occupations, pupils accept vocational

education. Data pertaining to pupils' educational and career aspirations were collected to investigate these propositions.

Over 73 per cent of pupils from the total sample wanted to continue with their education up to university level and another 21 per cent wanted to reach 'A' level. Table: 5 shows the distribution of pupils by the level of education they wanted to reach.

Table 5: Highest educational level aspired to by pupils

	Value label	Count	Percent
1.	No response	1	0.6
2.	'O' Level	10	5.5
3.	'A' Level	37	20.6
4.	University	132	73.3
	TOTAL	180	100.0

When asked what they wanted to do soon after completing their 'O' levels, 73 per cent gave 'A' levels as their preference, confirming their responses regarding the highest educational level they wanted to reach. A further 11 per cent wanted to go for apprenticeship training while 7 per cent opted for other forms of technical or commercial training. Less than three per cent wanted to become self-employed, and another three per cent wanted to get employed soon after completing their 'O' levels. According to the 'vocational fallacy' the aspirations to proceed to higher education contradicted the objectives of vocational education. It confirms one of the arguments of the 'fallacy' that vocational education does not lower the aspirations of pupils seeking to proceed to higher education. However, the criteria used to select pupils for the NFC courses seems

to explain and justify why pupils preferred to proceed with their education beyond 'O' level. Pupils were selected for the NFC courses on the basis of their higher academic ability and interest in relevant vocational subjects. Most of them therefore had realistic chances of qualifying for 'A' level studies and going to university. This would seem to imply that the high educational aspirations that pupils had were partly due to their confidence in qualifying for higher education. Also, their responses were consistent with the minimum educational levels they thought was required for the occupations they aspired to. However, most of them still aspired to vocationally oriented professional jobs. The relationship between the educational level pupils wanted to reach and the occupations they aspired to will be discussed after the data pertaining to pupils' career choices is presented. Figure 3 shows what pupils wanted to do soon after completing their 'O' levels.

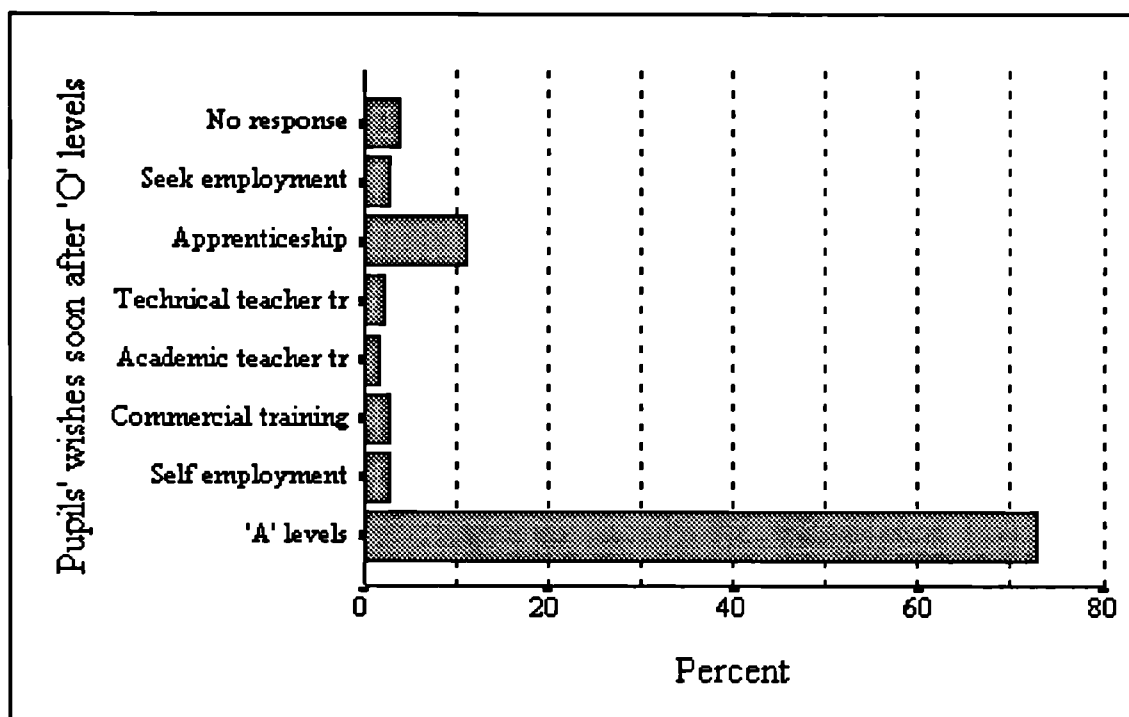


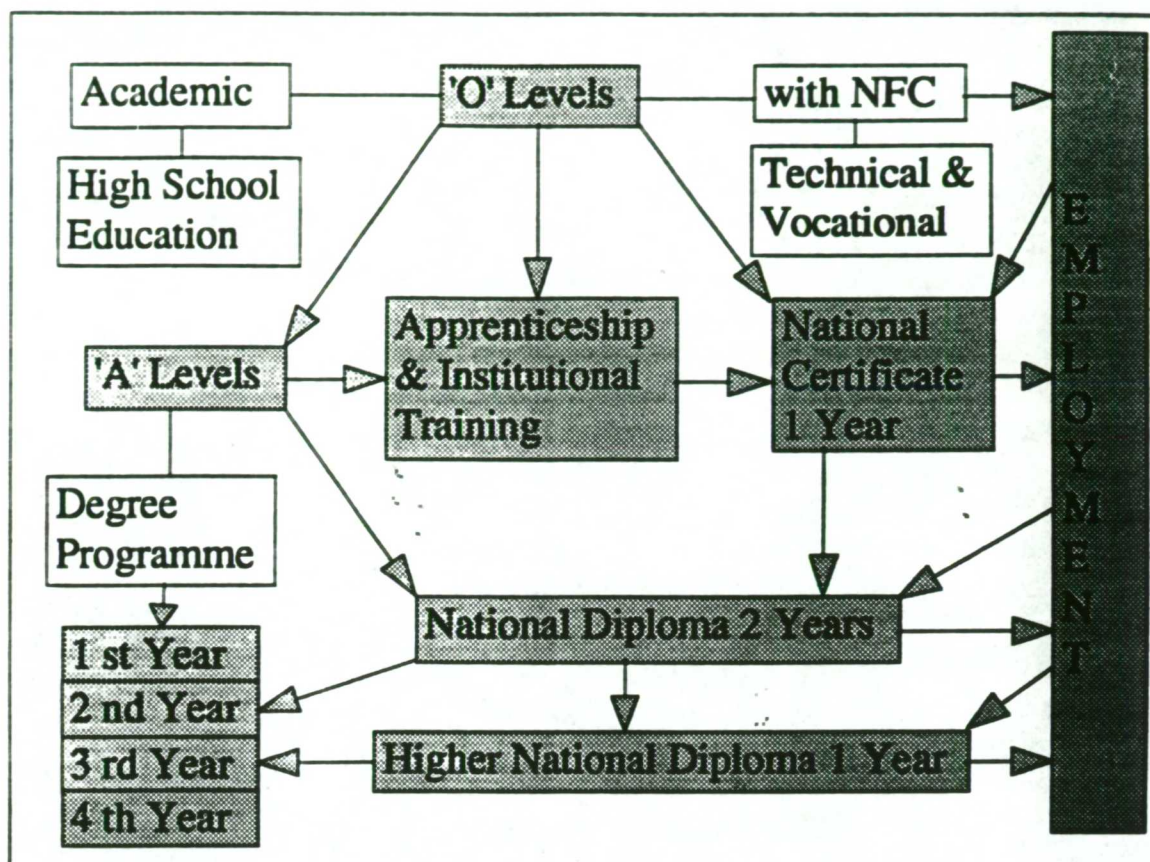
Figure 3: What pupils wished to do soon after their 'O' Levels

Although the educational aspirations seem to contradict the aims of vocational education as implied in literature, they still conform to the broader goals of the NFC and the 1986 Education Plan through which the vocationalisation pilot scheme was launched. The education and training policy that was unveiled through the Education Plan was discussed in chapter 6. While preparation for apprenticeship training and employment were stated as the major objectives of the programme, pupils have the option of advancing along the vocational route to university to do technically oriented degrees. This is in addition to their academic options which remain open since the pupils still have their full complement of academic subjects. After completing their NFC courses alongside the 'O' levels, the pupils are expected to either get employment or do a one-year National Certificate (NC) course. Those completing the NC can either seek employment or proceed on to a two-year National Diploma (ND). After the HND they

can seek employment, go for a one-year Higher National Diploma (HND), or join second year university studies in their relevant subject areas.

According to this plan, pupils who go for 'A' level studies are mainly those wishing to pursue academic courses at university. Even these pupils can diverge to the vocational route, through apprenticeship courses leading to the NC, the ND and the HND with options to join the labour market at all the various stages. Students graduating from the HND can either get jobs or join third-year studies at university. Chart 1 shows the alternative routes envisaged by the Ministry of Higher Education (1993, p.1), for pupils completing their 'O' levels.

Chart 1: Envisaged alternative routes for pupils leaving school



Adapted from: Ministry of Higher Education, Zimbabwe (1993)

Appendix 5 shows the envisaged structure for primary, secondary, further and higher education and training. It is intended eventually for pupils to be introduced to the use of tools and machinery as well as organised industrial visits at primary school level. This will be followed by a two-year Pre-Vocational Certificate in industrial arts at JC level. At 'O' level those taking the vocational option will be offered National Foundation Courses (NFC) in technical and vocational subjects. Although this plan is still at an embryonic stage, post-school training is already being planned along these lines. Even teacher training is already structured in accordance with this plan. Students

training as vocational teachers are now expected to go through the NFC and the NC as preparation to teach the NFC courses. However, according to the information collected during the fieldwork period it appeared that teachers on the NFC programme were neither fully informed about its objectives nor the provisions of the 1986 Education Plan through which the vocationalisation plan was unveiled. The implications of the lack of clarity of the programme goals is discussed in more detail when teachers' and EOs responses are analysed. Even though the university was included in the proposals, there did not appear to be any communication between the Ministries of Higher Education, Education and Culture and relevant departments at the University regarding the implementation of the 1986 plan.

The intention to keep options open for the NFC pupils to proceed to university conforms to the national goal of preparing skilled manpower at higher professional levels. The link between vocational courses and the university also ensures that those wishing to do technically oriented degrees have prior technical training and practical experience. This seems to be a response to the criticism that vocational education curtails the opportunities of pupils wishing to proceed to higher levels of education or training. It was intended to make the programme acceptable to pupils and this seems to explain why they were more positive towards the NFC courses in contrast to the views supporting the 'fallacy' of school-based vocational education. Most studies investigating vocationalisation of secondary education are based on the premise that such education is intended to lower the educational and career aspirations of pupils, thereby reducing demands for higher education and white-collar employment. The current study challenges this view especially in post-colonial developing countries where the problem

seems to be shortages rather than an over-supply of highly skilled manpower at professional levels.

(b) Career aspirations of NFC pupils

According to the vocational fallacy, pupils in vocational tracks aspire to higher education and white-collar occupations rather than remain in their areas of specialisation (Lauglo and Lillis, 1988). As discussed earlier, it is speculated that pupils use vocational education as a stepping stone to academic routes (Psacharopoulos and Loxley, 1985). These conclusions are deduced from the fact that most pupils aspire to higher education, which is generally regarded as academic rather than vocational. According to the findings concerning the educational aspirations of pupils following the NFC programme, the current study would appear to confirm the evidence from literature. However, such a conclusion would be premature without first establishing what occupations pupils aspired to and establishing the factors that seemed to influence their choices. Several questions were posed to find out what occupations pupils aspired to. This was mainly to find out if pupils' aspirations contradicted the goals of the NFC and vocational education in Zimbabwe. Pupils were also asked to indicate which subjects they thought were most and least useful in getting the jobs they aspired to and the minimum educational level they thought was required for these jobs. These questions were intended to establish the relationship between pupils' career choices, subject preferences, and factors which seemed to influence their aspirations.

Pupils were asked to name the jobs they wanted to do after completing their education. This was given as an open-ended question to ensure that pupils would not be restricted

or influenced by a pre-selected list of occupations. The question was also intended to find out pupils' awareness of the possible occupations on the labour market. The aggregated responses from all the schools included in the current study show that over 78 percent of the pupils preferred technically oriented occupations. The most popular occupations were those in Catering, apprenticeship-related trades such as Fitting and Turning and professional technical areas like Engineering and Architecture. The choice of jobs appeared to be related to the schools which pupils attended but this was because different schools offered different NFC subjects. Further analysis revealed that the NFC courses which pupils studied and not the schools attended seemed to influence their career choices.

Pupils at Allan Wilson and St. Johns generally chose occupations that were related to their NFC subjects and the overall range of occupations chosen by the pupils was smaller compared with the other schools. It seems pupils at these schools had common influences on their career choices. Pupils at Rusununguko indicated the widest range of careers and these were generally not directly related to their NFC subjects. Although 40 per cent of the pupils at the school chose vocationally-oriented occupations, only 27.5 per cent of them chose occupations which were directly related to their NFC subjects. Responses from Mukai showed a similar pattern. At both schools, pupils were doing Textile Design and Technology and Rusununguko also offered Cabinet Making. Pupils doing these subjects tended to choose occupations outside their areas of specialisation. The responses from Rakodzi and Kwayedza were also relatively spread in relation to the careers aspired to, but pupils tended to choose careers which were related to their NFC subjects. A difference in career choices was noted between sexes. This also appeared to

be due to the fact that the subjects which pupils were doing depended on their gender. Appendix 4 shows the detailed statistical summaries of pupils' responses.

Most of the pupils doing Catering and those doing Machine Shop Engineering aspired to occupations directly related to their courses. Those doing Building preferred to be architects or civil engineers rather than become builders. The high educational and occupational aspirations is consistent with the general findings observed in the literature review. However, although most of the pupils included in the current study aspired to high status occupations, their career choices were mainly related to technical areas and therefore consistent with the broader goals of the vocationalisation programme in Zimbabwe. Also, the aspirations seemed to be realistic since pupils were selected from the top streams and were likely to qualify for higher education or apprenticeship training. Figure 4 shows the distribution of pupils according to their career choices.

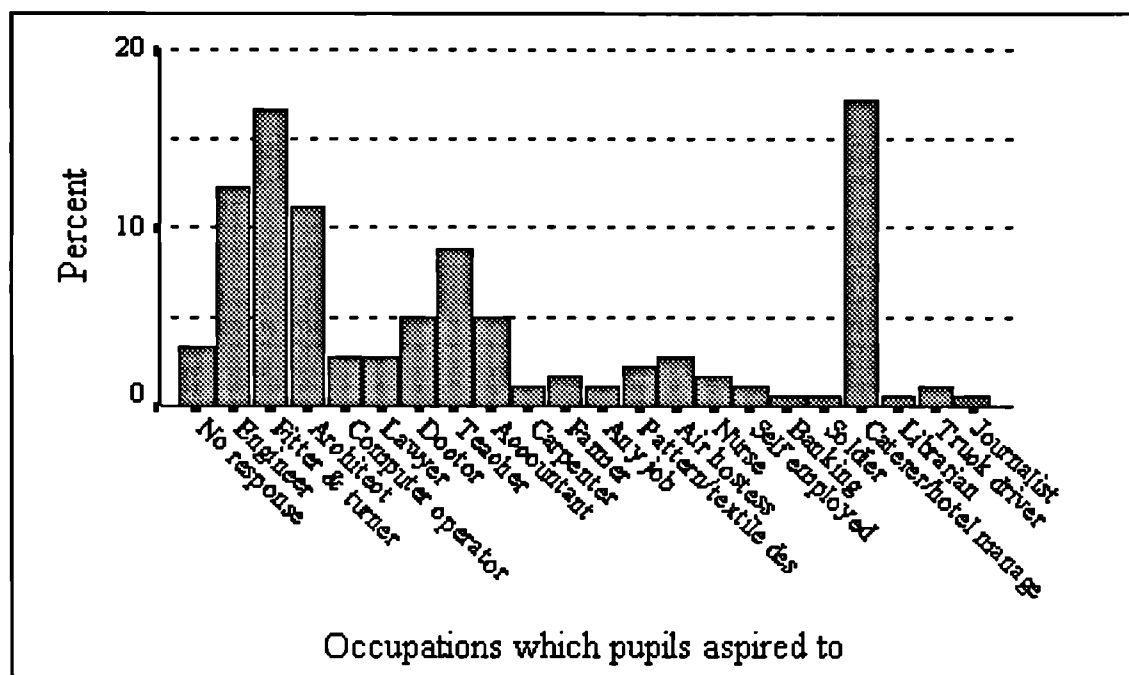


Figure 4: Pupils' career aspirations by type and percentage

One of the criticisms frequently cited in the vocational fallacy is that school-based vocational education fails to orient pupils towards rural occupations. When asked where they preferred to work, almost 59 per cent of the pupils chose large cities, 14 per cent wanted to work in small towns while 16 per cent did not mind working anywhere. Just over 3 per cent indicated rural areas and under one per cent wanted to work on a commercial farm. The other seven per cent did not respond to the question. None of the NFC courses investigated in the current study led to career opportunities in rural areas. The preference by most pupils to work in urban areas was therefore consistent with their career aspirations since the occupations they preferred were located in urban areas. It did not contradict the objectives of the NFC courses since the criteria used to select schools to pilot the scheme actually favoured urban schools and the courses led to urban-based occupations.

Approximately 62 per cent of the pupils indicated that their schools provided career guidance and counselling, even though they did not feel that this influenced their career choices. Some pupils indicated that although they were aware of the existence of career guidance and counselling in their schools, they had not received advice from it. This is probably due to the fact that career guidance is especially meant for pupils about to complete their 'O' or 'A' level studies. Since the survey was conducted during the first term of the academic year, it might have been too early for the careers teachers to have made any contact with either form three or four pupils.

As pointed out in chapter 6, the linking of schools to industry was particularly emphasised in the current vocationalisation policy. Pupils doing the NFC were expected to be attached to industries to gain some work experience before they left school. In response to the question whether their schools arranged for work experience, over 70 per cent agreed that they did. Most of the pupils attending the urban schools had been involved in a 'work experience scheme' called "school on the shop floor". As already stated in chapter 6, the scheme is jointly funded by the Ministry of Education and Culture, and the Confederation of Zimbabwe Industries (CZI). In the scheme, pupils are attached to a business enterprise for a period of about two weeks, during school holidays. Although the scheme is meant to cater for all subject areas in all schools the opportunities for industrial attachments were very limited, particularly for teachers and pupils in rural schools.

(c) Relationship between the NFC courses taken by pupils and their perceived chances of securing employment

Pupils' career aspirations were analysed in relation to their perceptions of the labour market opportunities. This was intended to find out if pupils following particular NFC courses were more confident than others in securing employment. All pupils were generally confident of getting the jobs they aspired to, irrespective of the occupations they chose, the NFC courses they were following or the school they attended. Within the respective subject areas, the largest proportion of pupils who indicated low chances of getting the jobs they aspired to were those doing Cabinet Making (34.5 per cent), Textile Design (25 per cent) and Textile Technology (24 per cent). Overall, only 19.5 per cent of the pupils in all the different subjects thought their chances of getting the jobs they aspired to were low compared to 78.8 per cent who thought their chances were high. The other 1.7 per cent of the pupils did not respond to the question.

(d) Relationship between the educational levels pupils wanted to reach and their perception of the qualifications required for the occupations they aspired to

As discussed in chapter 4, Collins (1977) analyses educational demand through the conflict theory and credentialism. From this perspective pupils aspire to increasingly high educational qualifications (credentials) as the competition for jobs gets keener. In such a situation, the level rather than the type of education determines occupational destinies of pupils. It is worth noting however that although most of those who gain access into the employment sector do so through credentials, most of the school leavers possessing credentials do not gain such access. It is argued in the vocational fallacy that pupils demand higher levels of education to enable them to secure white-collar

employment. Evidence from the current study (Figure 4) shows that pupils aspired to technically-related occupations, particularly at professional levels.

As shown in Table 5, the educational aspirations of pupils included in the current study were generally high. This was consistent with their aspirations for high-level professional occupations. It has also been noted that even though pupils wanted to continue with their education rather than seek employment at the end of their 'O' level education, this was not necessarily an indication that they wanted to pursue academic education. It is however necessary to investigate whether the high educational aspirations were related to their perceptions of the minimum qualifications required for the occupations they aspired to. Generally, the educational levels which pupils wanted to reach were higher than what they perceived as the minimum educational qualifications required for their preferred occupations. This might be due to their perceptions of the competitiveness of the labour market situation in which people with higher qualifications had better opportunities of securing employment.

The highest proportion of the pupils (44.4 per cent) thought the minimum educational qualification required for the jobs they aspired to was 'O' level. The next highest proportion (30 per cent) of the pupils regarded a university degree as essential while 23.3 per cent indicated 'A' level as the minimum educational level that would enable them to qualify. Only 1.7 per cent thought primary education was sufficient to get them the jobs they wanted. It was evident that a large proportion of the pupils did not seem to know the minimum educational qualifications required for the jobs they aspired to. For example, they indicated lower qualifications ('O' levels) for occupations such as

engineering and architecture which normally require university degrees. On the other hand, they indicated university degrees for occupations such as technicians or air hostesses in which 'O' levels are normally required.

When pupils were asked to indicate the jobs they would choose if they failed to get their first choices, 45 per cent of them still indicated technically oriented jobs with another 6 per cent indicating self-employment. 12.5 per cent wanted to become teachers or other professional non-technical occupations. Pupils who preferred professional occupations in technical areas such as engineering and architecture chose technician level jobs such as building, carpentry, cabinet making and pattern design as their second choices. It appears therefore that pupils aspired to the highest occupations as their first choice but were prepared to compromise within the same fields. The fact that pupils in vocational tracks generally aspired to vocationally oriented occupations and were not aspiring to jobs outside their areas of 'specialisation' contradicts the claims which emerged from the literature review in chapter 3. Their preference for higher education seems to indicate their preference for high status and lucrative occupations and not a rejection of technical and vocational areas.

(e) Relationship between pupils' career aspirations and what they perceived to be the expectations of their parents

The occupations which pupils aspired to were compared with the jobs they thought their parents wanted to them to do. This was to establish whether their high aspirations and preference for vocational occupations was influenced by what they perceived to be the expectations of their parents. Pupils were asked to indicate what occupations they

believed their parents wished for them. Approximately 40 per cent of the pupils thought their parents wanted them to get jobs that were technically oriented. Overall, the five most popular occupations were: medical doctor (15 per cent), teacher (12 per cent), engineer (11 per cent), fitter and turner / motor mechanic etc. (10 per cent) and nurse (8 per cent).

Even though the largest proportion (15 per cent) of the pupils thought their parents wanted them to become medical doctors only five per cent of them aspired to the profession. However, six out of the nine pupils who wanted to become doctors also thought this was what their parent wished for them. Pupils aspiring to high status or lucrative vocationally oriented occupations such as engineering, architecture or apprenticeship training generally thought their parents wanted them to take up these occupations. Most pupils thought their parents wanted them to take up high status jobs. None of the pupils chose self-employment and only one pupil (0.6 per cent) thought this was what his parents expected. Farming was not popular as well, with only three pupils (1.7 per cent) aspiring to become farmers. Two of these pupils thought their parents did not mind which job they took and the third pupil thought the parents wanted him to become a lawyer. Over nine per cent of the pupils did not respond to the question while over five per cent thought their parents would accept any job. On the whole, pupils did not think the jobs they aspired to were those that their parents wished for them. Appendix 4 shows a more complete picture of the full cross-tabulations between the jobs pupils aspired to and what they thought their parents wished for them. Figure 5 shows the occupations which pupils thought their parents preferred them to get.

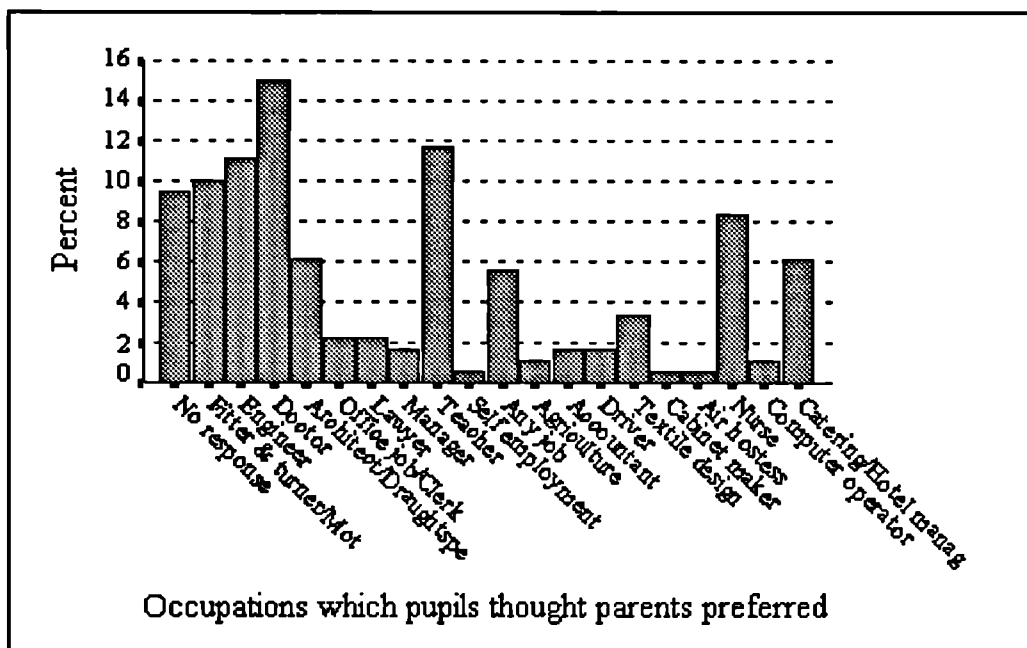


Figure 5: Pupils' perceptions of occupations preferred by parents

(f) Relationship between pupils' subject preferences and their careers choices

According to the literature survey in chapter 3, pupils prefer academic rather than vocational subjects (Lillis and Hogan, 1983; Lauglo and Lillis 1988). It is concluded therefore that this shows that they prefer white collar and not vocationally oriented occupations. Pupils included in the current study were asked to choose from among all the subjects they were studying (both academic and vocational) and state which ones they thought were most useful in preparing them for the careers they wanted. The subjects which pupils thought were most useful were English (22 per cent) and Sciences (18 per cent). Other subjects pupils thought would help them get the jobs they aspired to included Building (10 per cent), Catering (10 per cent) and Mathematics (8 per cent), Metalwork (6 per cent), Technical Drawing (5 per cent) and Textile Design and Technology (5 per cent). Figure 6 shows the full responses of pupils regarding the subjects which pupils thought were most useful in securing the jobs they aspired to.

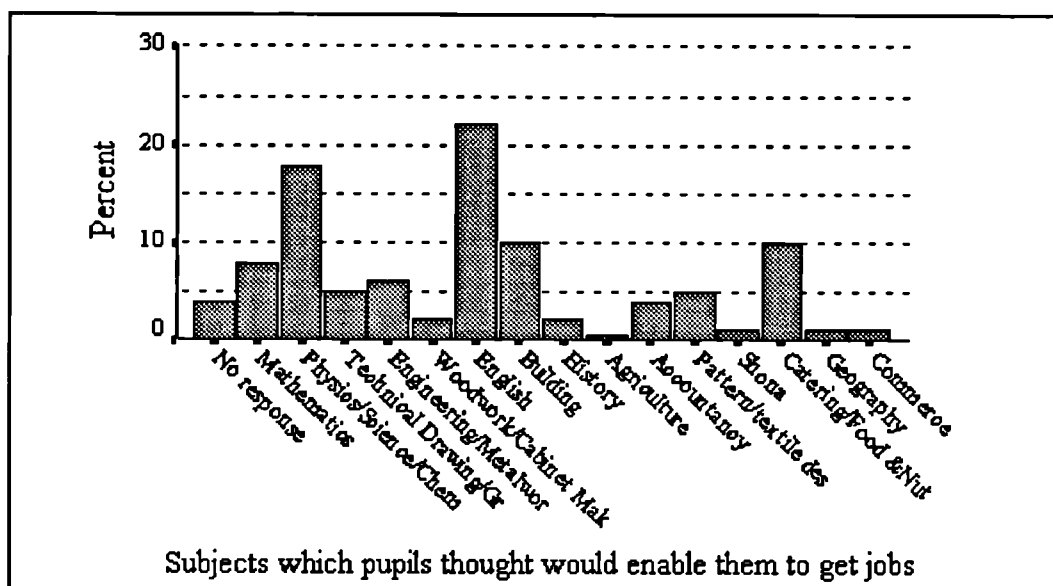


Figure 6: Pupils' perceptions of subjects most useful for employment

The choice of English, Mathematics and Science seems to be influenced by the fact that these are the commonly stated subjects for most post-secondary school training and employment opportunities. According to the vocational fallacy, schools should put more emphasis on the teaching of these subjects rather than provide vocational subjects which are too expensive and do not seem to achieve their intended objectives. It is argued in the current study that such a view seems to regard academic and vocational subjects as alternative rather than complementary in school curricula. The subjects which pupils thought were most useful in getting the jobs they aspired to seemed to correspond with their NFC subject areas which in turn seemed to influence their career choices. Pupils who chose English were mainly those doing Catering, Bricklaying, Textile Design and Textile Technology. Only one pupil out of the twenty-three doing Machine Shop Engineering and two out of the twenty-nine doing Cabinet Making thought English was the most useful subject for jobs they aspired to. Ten out of the fourteen who indicated Mathematics were doing Machine Shop Engineering (5) and Brick / Blocklaying (5).

Most of the thirty-two pupils who chose the Sciences as the most useful were doing Cabinet Making (10) Brick/Blocklaying (8) Catering (5) and Textile Technology (5). The responses seem to indicate that while pupils thought their NFC subjects would enable them to secure employment (Table 6), they were also aware that English, Mathematics and Science were required for most post-school opportunities (Figure 6).

In order to find out whether the subjects pupils thought were the most useful to qualify for the careers they aspired to were also their favourite ones, pupils were asked to indicate which subjects they preferred most and which ones they preferred least. English, Mathematics and Sciences were chosen as the most popular subjects. This was consistent with the subjects they thought were most useful to enable them to get the jobs they aspired to after leaving school. It is necessary to note that although most pupils indicated these academic subjects as the most useful and favourite subjects, they still ranked their NFC subjects highly and aspired to occupations in line with their vocational areas.

7.2.3 Perceptions of pupils in relation to the NFC courses

(a) The criteria pupils thought was used in their selection for the NFC courses

While pupils' acceptance or rejection of vocational education tends to be influenced by their perception of labour market opportunities, they also tend to be influenced by the criteria used in schools to select pupils for such education. Both parents and pupils tend to associate education offered to less able pupils only with lower status, and less educational and career opportunities. Pupils were asked to indicate the criteria they thought was used in selecting them for the NFC programme. The largest proportion of them (42 per cent), thought it was because they had attained the best mid-year or final

results in the Zimbabwe Junior Certificate (ZJC). The second large proportion (38 per cent) of them indicated that they had been selected because of their interest in the NFC course. Only four per cent thought their selection was because they had attained moderate ZJC results. 16 per cent of the pupils did not respond to the question, an indication that probably they did not know the criteria used and did not want to speculate. These responses show that pupils did not regard themselves as less able and that they were not forced into the programme.

(b) How useful pupils thought the NFC was in relation to its intended goals

Pupils' perceptions towards vocational subjects were investigated in relation to their educational and career aspirations. Information was also collected to find out how useful pupils thought the NFC courses were in meeting specific objectives which the programme was intended to achieve according to the 1986 Education Plan discussed in chapter 6. Pupils thought the NFC was very useful particularly in preparing for employment and enabling them to apply theoretical knowledge practically. The responses from the different schools and subject areas were similar for these aspects although approximately 35 per cent of the pupils doing Textile Technology thought the subject was only slightly useful and over ten per cent indicated 'not useful' in enabling them to apply theoretical knowledge practically. Responses of pupils doing Machine Shop Engineering and those doing Cabinet Making were consistently high in all the aspects. Pupils' responses were particularly varied regarding the usefulness of the NFC in the following areas:

- preparing them for apprenticeship;

- developing positive attitudes towards manual work; and
- preparing for self-employment.

Overall, 68 per cent of the pupils thought the NFC was 'very useful' compared to sixteen percent who thought it was only slightly useful. Only seven per cent indicated that it was not useful while the other 9 per cent were not sure. In relation to the other responses, there were fewer pupils who thought the NFC was useful in developing in them a positive attitude towards manual work. Nevertheless, 74 per cent of them indicated that the NFC was useful in this respect too. Table 6 shows what pupils thought about the usefulness of the NFC in the various aspects related to its goals.

Table 6: Perceptions of pupils regarding usefulness of the NFC

Perceived role of the NFC	Very useful	Slightly useful	Not useful	Not sure
1. Preparing for employment	85	9	2	4
2. Preparing for apprenticeship	62	22	5	11
3. Developing a positive attitude towards manual work	50	24	14	12
4. Preparing for self-employment	68	14	8	10
5. Applying theoretical knowledge practically	76	13	4	7
Mean percentage	68	16	7	9

7.2.4 Factors related to teachers and the provision of the NFC

(a) Qualifications and experience of teachers and their implications for the NFC

As pointed out in the literature survey in chapter 3, one of the reasons attributed to the failure of vocational programmes is that teachers are under-qualified and lack the

necessary experience to impart work-related skills. According to the criteria used to select teachers for the ZNCC / NFC scheme, only teachers who were suitably qualified and experienced were to teach on the programme. In response to what their highest academic qualifications were, one teacher indicated the junior certificate (JC), eight had gone as far as 'O' level, three had reached 'A' level and the other two had done Standard 6 (eight years primary education in the colonial education system). With regard to their professional qualifications; two teachers had none, four had a Secondary Teachers Certificate (STC), six had done a Bachelor of Education (B.Ed.) degree and the other two had an Elementary Industrial Certificate (EIC).

Most of the teachers also had other vocational qualifications and industrial experience ranging from a few weeks to a few years. Three of them had trade qualifications in Cabinet Making or Woodwork, three had done the EIC, one had done a two-week work-experience attachment in Pattern Cutting and Tailoring, another had done a three-week course in Textile Design while one other teacher had qualified as a Journeyman Turner Machinist. Two of the teachers did not have formal training in teaching while nine of them had trained at Gweru Teachers College, one at Belvedere and the other two at Triashill Training School. Of these colleges, only Belvedere is still training technical education teachers. Six of the teachers had majored in Woodwork, two of them in Building, one in Fashion and Fabrics, one in Food and Nutrition, another in Home Economics (a combination of Fashion and Fabrics and Food and Nutrition), one in Metalwork and as noted earlier, two had not been trained as teachers.

Since one of the criteria used for selection to teach on the programme was industrial

experience, teachers were asked to indicate if they had any. Seven of them indicated that they did not have any other working experience besides teaching. The other seven had worked in industrial occupations such as apprenticed carpenters or joiners, injection moulder, building foreman, shoe maker, till operator and plan reader. Only two of the teachers had been on industrial attachment even though such work-experience was particularly emphasised as essential in the vocationalisation policy. The teachers who did not have industrial experience were sufficiently qualified professionally to meet the requirements of the programme.

Background characteristics have several implications for the provision of vocational education. According to the vocational fallacy, teachers' qualifications and experience are among the main factors influencing such provision. It is alleged that teachers are not suitably qualified and experienced to provide the necessary industrial skills and therefore vocational education programmes fail to achieve their intended objectives. The selection of teachers to pilot the ZNCC / NFC vocationalisation schemes in Zimbabwe seems to have taken these factors into account. However, the nature of the qualifications and experience depend on the perceived goals of the programme being implemented. As discussed in chapters 3 and 4, the purposes of vocational education are related to the broader socioeconomic and political factors. It is necessary to consider whether the main objective is to prepare pupils to meet the immediate requirements of the formal employment sector, to lower their educational and career aspirations, or whether vocational education is provided with broader long-term goals for personal and economic development and autonomy at both individual and national levels.

When considerations for the provision of vocational education are limited to the immediate requirements of industry, pupils are expected to be equipped with relevant employment skills. Teachers are therefore required to be 'suitably' qualified and experienced to provide such skills. Industrial rather than educational qualifications are regarded as more appropriate since the emphasis of such vocational education is the development of psycho-motor rather than cognitive skills. Teachers with industrial qualifications and experience are regarded as more suitable for the programme. When vocational education is seen as an extension of the general education to provide more options for pupils leaving school, then industrial experience is regarded as less essential. Educational qualifications are more important for teachers preparing pupils to continue into higher education. For such pupils, the emphasis is on understanding principles and other cognitive aspects of vocational education and not merely the inculcation of manipulative skills.

(b) Teacher mobility as a factor in the provision of the NFC

It was pointed out in chapter 2 that one of the main reasons given for the limited success of the EWP programme was that teachers who were interested and experienced in the programme were transferred and replaced with those who lacked both understanding and interest in EWP. In the current study, teachers were therefore asked to indicate how long they had been at their current schools. Nine of the fourteen teachers had been teaching at the same schools for periods ranging between six and fifteen years. Three had been at their current schools for less than six years and the other two had remained at the same schools for periods ranging between sixteen and twenty years. Teacher mobility did not appear to be a major constraint to the NFC

scheme.

(c) Status of the NFC teachers within the schools

Vocational teachers in Zimbabwe have generally been accorded an inferior status in schools and tend to have less promotion prospects. This tends to influence their morale, commitment to the teaching of their specialist subjects and the esteem in which they are regarded by pupils. Also, it seems to indicate the status of practical subjects in relation to academic. Six of the teachers included in the current study did not hold any administrative or other posts of special responsibility, five were heads of departments (HODs) and two were senior masters. One of the teachers was only working on part-time basis after retiring as a Deputy Chief Education Officer (CEO) in the Ministry of Education and Culture. On the whole, the teachers taking the NFC courses were respected members of staff in their schools and seemed to be confident that their subject areas made an important contribution to their school curricula.

(d) Time available to teachers for the NFC courses

Although teachers might be qualified and experienced, the amount of time allocated for vocational subjects tends to limit their success in imparting vocational skills. As pointed out in chapter 6, one of the ways in which policy makers attempted to improve the NFC in relation to previous programmes was that more time was to be made available for the programme. The amount of time spent, particularly on practical work is regarded as crucial for the mastery of workshop skills. It was found in the current study that attempts had been made to provide more time for the NFC courses. All the fourteen teachers were teaching vocational subjects only, although it is common practice in

Zimbabwe for such teachers to teach academic subjects as well. Seven of them taught Cabinet Making, one taught Machine Shop Engineering, two taught Brick / Blocklaying, two taught Catering, one taught Textile Design and one taught Textile Technology. The responses to the question regarding the number of periods allocated for the NFC were varied, ranging from three to twenty periods per week. It became apparent however during the interviews that this was because some of the teachers combined the 'O' level and NFC periods while others split them.

According to the Ministry requirements, fourteen periods per week were required specifically for the NFC. However, schools were not obliged to include the NFC on their normal timetables but could treat it as an extra-curricula activity. All the pupils taking the NFC course also did a similar technical subject at 'O' level. Some schools therefore combined the periods for the two programmes, providing the additional hours required for the NFC after the normal school timetable. At one of the schools pupils were not even compelled to attend the additional sessions for the NFC course since they could opt to go for sports or other extra-curricula activities instead. The reason why the 'O' level technical subjects and the NFC were being offered as separate subjects was not apparent. This seemed to result in duplication in the teaching of practical and theory to meet the requirements of two examinations but without imparting new skills or knowledge. The dual provision also exerted further constraints on the tight school timetables and resulted in the situation in which the NFC did not appear on the normal timetables and was offered as an 'overtime course'.

(e) Perceptions of teachers regarding the NFC pilot scheme

While chapter 6 examined the NFC from the perspective of policy makers, it is necessary to find out how teachers perceived the scheme. It is their interpretation of policy that is translated into practice. Information was therefore collected regarding how teachers perceived the ZNCC / NFC pilot schemes. This was found necessary not only to clarify the current status of the vocationalisation programme, but to also investigate if their views were in agreement with the stated goals. Although the disparities between policy and practice is not the main concern of the current study, it was found necessary to investigate views of the Ministry officials, teachers and pupils in order to get a cross-section picture of the programme.

Most of the questions regarding teachers' perceptions of the programme were similar to those posed to Education Officers and pupils. This was done in order to find out if they perceived the programme differently and if there were any contradictions that might need to be accounted for in analysing the data collected from the different groups. Table 7 shows the responses of teachers regarding the degree to which they thought the NFC was useful in preparing pupils for the various objectives which the current vocationalisation policy was intended to achieve. These objectives are among those commonly stated in international literature in relation to school-based vocational education. Table 7 shows how useful the fourteen teachers thought the NFC was in meeting specific objectives. Although the 'Very useful' and 'Slightly useful' responses appear separately, these two categories are merged in the analysis so that the responses come under 'useful' or 'not useful'.

Table 7: Perceptions of teachers regarding usefulness of the NFC

Perceived role of the NFC	Very useful	Slightly useful	Not useful
1. Preparing for employment	4	8	2
2. Preparing for apprenticeship	8	4	2
3. Developing a positive attitude towards manual work	8	5	1
4. Preparing for self-employment	6	8	0
5. Applying theoretical knowledge practically	9	5	0
Mean number of responses	7	6	1

Most of the fourteen teachers included in the study thought the NFC was useful in enabling pupils to apply theoretical knowledge practically, preparing for apprenticeship, and developing a positive attitude towards manual work. On the whole, teachers had less confidence in the programme than pupils (see table 6) particularly in preparing pupils for employment. This is probably because they were being more realistic about the labour market situation than pupils. While most pupils thought the most useful aspect of the NFC was in preparing them for employment, teachers indicated this as the weakest aspect fulfilled by the programme. Both teachers and pupils however agreed that the NFC was very useful in enabling pupils to apply theoretical knowledge practically.

In response to the question about what they thought was the relationship between the NFC course and employment, eleven of the teachers indicated that there was a strong relationship while the other three thought there was a slight relationship. This seems paradoxical considering that they indicated less optimism about the usefulness of the

programme in preparing pupils for employment. However, it appears that their pessimism was due to the realities of the labour market where jobs were scarce, not because they thought the programmes did not equip pupils with relevant employment skills.

Teachers were asked how they perceived the implementation of the programme. Generally, they did not seem to be sure about who drew up the NFC syllabus. Four of them thought the syllabus had been made by the Ministry of Higher Education (MoHE); another four thought it was the done by the Ministry of Education and Culture (MoEC); one indicated both the MoHE and industry; one thought the two Ministries of Higher Education and Education and Culture had made the syllabus; one thought the two Ministries of Education together with industry had been involved; while another thought it was the Ministry of Manpower Planning and Development. Two of the teachers indicated that they did not know who had made the syllabus. It was clear however that teachers had not been involved in drawing up the courses. Asked if they adhered strictly to the provided NFC syllabus, seven teachers responded in the affirmative while the other seven indicated that they made changes where they deemed it necessary.

The criteria used to select pupils for the courses seemed to differ from school to school but generally pupils were selected on the basis of best or moderate examination results at ZJC. Five teachers indicated the 'best mid-year / ZJC' while another five indicated 'moderate mid-year / ZJC results as the criteria used to select pupils while according to the other four teachers, only those interested in the NFC programme were selected. Both pupils' and teachers' responses show that the selection was not according to the usual

tendency to select only those with low academic ability. The academic ability of pupils included in a programme plays a significant role in inculcating positive attitudes and acceptability of the vocational courses.

As mentioned in chapter 6, the vocationalisation pilot scheme was introduced as the Zimbabwe National Craft Certificate (ZNCC) but was later changed to the NFC. Teachers were asked if the NFC was an improvement over the ZNCC. Five of them agreed that it was, while six did not think the NFC was better than the original programme. The other three teachers did not know since they had only experienced the NFC and not the original programme. When asked to indicate the degree to which they thought the NFC differed from the 'O' level syllabus, teachers were split in their opinion, seven of them indicating that the syllabi were 'very different' while the other seven thought they were only 'slightly different'. Teachers seemed to agree that while the 'O' level syllabus emphasised more theory, the NFC was mainly concerned with practical work. They felt that the level of theoretical work involved in the NFC courses was too elementary.

One of the main goals of the NFC was to prepare pupils for employment. Work experience and careers guidance were therefore accorded a significant role in the vocationalisation programme. Ten of the teachers indicated that their schools arranged for pupils to get work experience while the other four disagreed. There seemed to be a problem with rural schools in arranging for pupils or teachers to go for industrial attachment and get the necessary work-experience. There was stronger agreement on the provision of careers guidance, with twelve out of the fourteen teachers indicating that

their schools had this provision. Responding to the question whether the schools assisted in placing pupils in employment, four of them answered in the affirmative, five disagreed, another three indicated that sometimes schools did, while the other two did not know whether schools assisted pupils or not.

In order to find out their overall perceptions of the programme, teachers were asked to state what they thought were the main strengths of the NFC pilot scheme. The responses were varied and included preparation for the labour market and further training and the availability of more resources. Most of them felt that the NFC improved pupils' chances for further training at polytechnics and vocational training colleges. Even though they were pessimistic about the employment prospects of pupils generally, they still thought the NFC enhanced pupils' employment prospects better than purely academic subjects. They appeared to be more confident in the programme's ability to prepare pupils for self-employment than formal sector employment. Teachers thought the NFC was more related to the world of work and provided the necessary link between schools and industry. They appreciated the emphasis on workshop skills and the industrial attachments which were regarded as part of the programme. Some of the teachers thought the skills imparted through the NFC were not only relevant to industry but everyday life situations such as carrying out maintenance work at home.

In response to what they regarded as the major weaknesses of the programme, teachers pointed out what they saw as a lack of clarity regarding the vocationalisation policy and guidelines from the two Ministries of Education. They felt that they had insufficient materials, equipment and financial resources to run the programme effectively. Most of

them indicated their concern about the lack of employment opportunities for pupils whom they thought were adequately equipped through the programme. Although industrial exposure was one of the requirements of the programme, many teachers felt that in practice this was not happening for either pupils or themselves.

Teachers were asked what in their opinion were the improvements required for the NFC programme. Box 7.1 shows a summary of what the teachers suggested as improvements to the NFC programme.

Box 7.1 Teachers' suggestions for the improvement of the NFC programme

- (a) More financial and material resources should be provided;
- (b) Equipment should be serviced more regularly;
- (c) The course should be made part of the normal school time-table;
- (d) The discussions and decisions about the syllabi should involve teachers, officials from the two Ministries of Education and industrialists;
- (e) Industrial attachment should be made more possible for all teachers and pupils on the programme;
- (f) Since this is a special programme and generally extends outside the normal working hours, teachers should be given an incentive in the form of an allowance such as that given to those teaching 'A' level pupils.
- (g) Although practical work is intensive, the theory should be made more comprehensive since it is too simple for pupils at this level of education.
- (h) More NFC courses should be made available for pupils to choose from.
- (i) Related subjects such as science and mathematics should be integrated with the NFC courses.
- (j) More people with vocationally oriented qualifications are required at senior levels among the policy making ranks and to head schools implementing such programmes. Many administrators with academic backgrounds lack knowledge and insight and tend to be negative towards vocational education.
- (k) The two Ministries of Education should be merged to avoid conflicts resulting.

7.2.5 Perceptions of the EOs regarding the ZNCC and NFC pilot schemes

The EOs were not unanimous regarding who they thought had drawn up the syllabi. Two of them thought it was the Ministry of Higher Education, another two thought it was both Ministries of Education while four thought the syllabi had been jointly drawn up by the two Ministries and the representatives from industry. It appeared that although EOs were responsible for technical education in their provinces, they were not fully involved in planning the vocationalisation scheme or designing the courses. Decisions

appeared to have been made at Head Office and EOs were only involved at the implementation stage. Even then, some provinces had not yet started the programmes and EOs therefore did not have detailed information of the programme. Workshops were however being run where officials from the Head Office of the Ministry of Education and Culture briefed the EOs about the developments taking place at policy level and what was expected of them. This seemed to make the position of EOs rather difficult when it came to advising schools what to do since in some cases the schools took the initiative to find out direct from Head Office and were therefore more informed than the EOs. Many of them expressed frustration at what they perceived as a lack of guidance from either Ministries of Education. Some of the schools which had stopped offering the programme cited this as one of the major reasons for their withdrawal. As one headmaster of such schools put it:

The Ministry itself does not seem to know what it is doing... My teachers did not get syllabuses or guidance... My Head of Department and I contacted the Ministry on numerous occasions to get syllabuses or to get our machines repaired but did not get any help. I therefore decided to discontinue the programme until they get more organised.

EOs were in agreement regarding the criteria used to select pupils for the NFC courses. It was the responsibility of schools to decide who was to be included in the programme but as a policy guideline, schools were expected to select those pupils who had done related vocational subjects at ZJC and were both able and interested in the subject. As mentioned earlier, some teachers felt there was a need for a definite policy position to ensure that such decisions would not be left to the discretion of school heads who in some cases tended to assign less able pupils for the courses. This was mentioned as one of the reasons why the examination results of the initial ZNCC pilot scheme were poor

and led to its replacement with the NFC. However, although this was the case in some instances with the ZNCC, pupils taking the current NFC course were generally among the more able ones.

Asked whether they thought the NFC was an improvement over the ZNCC, four of the EOs felt that it was, while three did not think so and the other one was not sure. The reasons given by those who agreed and those who disagreed that it was an improvement were similar. They unanimously agreed that the NFC was less demanding than the original ZNCC in terms of the level of proficiency expected of the pupils in practical work. Those who were in favour of the current programme argued that given the constraints of time and resources in schools, the original programme was too difficult for pupils. On the other hand, some thought that the NFC had been 'watered down' too much. While the majority of the pupils failed the ZNCC examinations, the pass rate for the current NFC was over ninety percent at most schools. The fact that the ZNCC was too difficult as a school subject was because it was originally designed for those in post-school training institutions who took it as a full-time course. In schools however, pupils did it as an additional subject to their normal 'O' level subjects. It seems understandable that EOs could not agree whether making the course easier for pupils was an improvement or not. If the main consideration was to provide a vocational 'qualification' rather than the skills acquired, then it makes sense to simplify the course and make more pupils pass. However, this cannot be justified if the concern is to equip pupils with high-level technical skills before they leave schools. Such arguments invoke broader theoretical arguments about the purposes of education and the notions of 'credentialism' discussed in chapter 4 (section 4.6).

With regard to the degree to which the NFC and the 'O' level technical syllabuses differed, three EOs thought they were very different while the other five felt there was only a slight difference. In spite of the disagreements about whether the 'simplification' of the vocationalisation pilot courses was an improvement and the fact that most of them thought it was only slightly different from the 'O' level syllabus, all the eight EOs thought that there was still a strong relationship between the NFC and the world of work. As mentioned in the previous section, teachers were also split regarding the degree to which they thought the NFC and the 'O' level were different. This raises the question of why then the pupils were being asked to do two practical subjects which were not very different from each other. Again the notion of 'credentialism' crops up, suggesting that it is the certification that seemed to matter rather than the actual content of school curricula.

EOs were asked to indicate what they thought were the main objectives of the NFC. They were asked to rank a list of six objectives according to their perceived order of importance. The six objectives are normally cited in literature as goals of vocational education programmes and were indicated in the goals of the 1986 Education Plan discussed in chapter 6. Table 8 shows the responses of each EO in columns marked A-H with column (=) giving the aggregated rank scores for each objective. The row with the lowest aggregated score indicates the most popular objective while the highest score shows the objective regarded the least by the EOs.

Table 8: Responses of EOs regarding the perceived objectives of the NFC

Perceived objective	Responses of EOs A-H								
	A	B	C	D	E	F	G	H	=
1. Preparation for formal employment	2	1	1	5	1	2	2	3	17
2. Preparation for vocational training	5	5	3	3	6	5	6	5	38
3. Preparation for higher education	3	2	4	4	2	1	1	6	23
4. Development of a positive attitude towards manual work	1	3	6	2	3	4	3	1	23
5. Preparation for self-employment	4	6	2	6	4	3	4	2	31
6. Practical application of theoretical knowledge	6	4	5	1	5	6	5	4	36

EOS were not unanimous regarding what they perceived as the main objectives of the NFC programme. According to their responses summarised in Table 8, preparation for formal sector employment was regarded as the main objective of the NFC while preparation for further vocational training was of least importance. Preparation for higher education and the development of positive attitudes towards manual work were also ranked relatively high. Most of the EOs did not seem to think the role of the NFC was to prepare pupils for further vocational training. Both teachers and pupils however thought the programme was useful in preparing for apprenticeship training. It seems that the EOs felt that the preparation pupils got through the programme would be for higher education generally and not restricted to vocational training only.

In response to what they regarded as the major strength of the NFC, all the eight EOs indicated the development of practical skills and thought the qualification was recognised by industry. They felt therefore that it improved pupils' employment prospects. Only one of them stated that it promoted self-reliance in pupils or the creation

of self-employment. They did not think that the syllabus included elements that would enable pupils to create their own jobs. The common weaknesses cited by the EOs were as follows:

- (a) There was a lack of appropriate equipment;
- (b) Teachers did not have industrial experience;
- (c) The funding was inadequate;
- (d) The communication between the two Ministries of Education, industry and schools was unsatisfactory;
- (e) Rural schools were far from industries and therefore found it difficult to place teachers and pupils for work-experience.

EOs were asked to state their general opinions about the NFC. They felt that the programme was worthwhile for pupils since it related to the world of work. Most of the EOs stated that the NFC addressed the problem of school leaver unemployment. There was need to foster more liaison with the Ministry of Higher Education which was in control of the programme and the funding system needed to be improved. The programme needed more support from both government and industry in terms of the provision of resources and placement of both teachers and pupils for work experience. The EOs felt that teachers on the programme needed to be sent for staff development and industrial attachments to make them more effective.

7.3 Conclusions

In drawing conclusions to the findings in the current chapter, it is necessary to reiterate that the ZNCC and NFC pilot schemes were introduced in spite of the fact that previous attempts to vocationalise school curricula had failed. Specific attempts were made to

avoid previous pitfalls and the problems normally associated with school-based vocational education in international literature. This was evident in the fact that the schools and pupils included in the NFC vocationalisation scheme did not typify those to whom such education is normally offered in Zimbabwe. While vocational education is normally associated with schools which are attended mainly by pupils from lower socioeconomic backgrounds, the schools included in the ZNCC and NFC schemes had relatively superior facilities and drew their pupils from relatively high socioeconomic backgrounds. Pupils selected for the NFC were those who had attained higher grades in their ZJC examinations, unlike previous programmes in which vocational education was offered to less able pupils. From this point of view, the ZNCC and NFC pilot schemes resembled the model of vocationalisation of the Kenyan Technical High Schools (Lauglo and Lillis, 1988) discussed in chapter 3.

The responses of pupils doing the NFC courses seemed to indicate that most of them preferred vocationally oriented occupations. Most of them wished to continue with their education up to 'A' level and proceed to university. Previous studies have found that pupils generally have high academic aspirations that seem to exceed the requirements of technically or vocationally oriented occupations (Psacharopoulos and Loxley, 1985). They conclude that the desire to go for higher education is an indication that pupils prefer academic to vocational education. This however did not seem to be the case with the pupils included in the current study. It seems pupils wanted to continue with their education rather than seek employment soon after their 'O' levels because of what they perceived to be the academic requirements of their aspired occupations.

The fact that they wanted to go for further education rather than training or employment, does not seem to imply their dislike of technically oriented jobs as concluded in the vocational fallacy. For example, the engineering and architectural occupations which most of the pupils preferred, are studied at degree level and can therefore influence pupils' desire to acquire university education. Even pupils hoping to get jobs which require apprenticeship or other technical training wanted to get educated beyond 'O' levels. The diminishing labour market opportunities have resulted in a keen competition for jobs among school leavers. This has led to an escalation of qualifications and what Collins (1979) labelled as "credentialism", discussed in chapter 4. Pupils believe that they stand better chances on the labour market if they possess higher credentials. For example, pupils with 'A' levels are more likely to be selected for apprenticeship and other post-school opportunities, irrespective of the curricula followed at school. Because 'A' level studies in Zimbabwe are virtually all academic, this has led to a situation where pupils with academic qualifications stand better chances of being selected for apprenticeship training than those from vocational tracks. It is only when pupils from vocational tracks also possess similar levels of educational qualifications that their vocational subjects give them an advantage over academic pupils in securing employment or training opportunities. However, this is unlikely to be the case when vocational education is offered to less able pupils only.

The NFC is offered to more able pupils. The vocationalisation programme is not offered at separate schools and the schools have relatively superior facilities in relation to the rest. The teachers are also relatively highly qualified and most of them have other vocational qualifications and industrial experience besides their areas of specialisation.

It would seem then that the NFC should succeed since it avoids the problems normally associated with school-based vocational education. The vocational fallacy argument that pupils dislike vocational education and prefer academic education instead, is not confirmed by evidence from the Zimbabwe.

Chart 1 in section 7.4.1 shows the envisaged routes of pupils leaving school. According to this model, pupils can either follow an academic line or follow the vocational route. Pupils with the NFC qualifications are expected to take the vocational line which can still lead to the university after the National Diploma (ND) or Higher National Diploma (HND). Pupils are expected to get employment at various stages if opportunities arise and they are willing to do so. Also, people in employment can return for training at various levels in the post-school vocational training institutions. The aspirations of pupils doing the NFC courses did not seem to contradict these objectives even though they were not aware of these envisaged alternative routes. It is necessary to point out that the model depicted in chart 1 was still at its embryonic stage. It is therefore not clear to what extent it was going to succeed. As pointed out earlier, pupils' desire to proceed to university did not contradict the broader goals of the NFC vocationalisation scheme. However, the lack of vocational subjects at 'A' level meant that pupils would need to take academic subjects only even if they might have preferred technical subjects in preparation for their university courses.

The fact that vocational education does not necessarily lead to better opportunities would seem to confirm the 'fallacy' of school-based vocational education. However, the rising levels of unemployment of pupils leaving school with academic qualifications in

Zimbabwe suggests that academic credentials do not improve employment opportunities either. As far as employment opportunities are concerned, it is not the type of education that pupils have followed that determines their chances. It was argued in the theoretical discussion in chapter 4 that employment opportunities are mainly influenced by various socioeconomic and political factors. Educational qualifications or credentials are therefore not sufficient on their own to determine labour market outcomes. The 'vocational fallacy' gives the impression that academic education leads to more employment opportunities. Experiences in Zimbabwe in which curricula have remained largely academic have shown that this is not the case. The increasing number of pupils leaving school with academic qualifications remain unemployed. According to the economic arguments emerging in the vocationalisation debate, even if the labour market outcomes of vocational and academic education were similar, the fact that vocational education is more costly makes it a less viable option. However, post-colonial countries like Zimbabwe cannot base their education policies on immediate outcomes or cost considerations. The need to develop an endogenous technological capability far outweighs the costs incurred in providing such education.

It is the contention of the current study that basing the success of school-based vocational education on its labour market outcomes implies that its main purpose is to meet the requirements of the formal sector. In post-colonial countries however, such education is also intended to provide an indigenous pool of skilled personnel, create alternative production systems and help integrate more indigenous people into the production system. It therefore becomes necessary to include the inculcation of technical and technological concepts as part of the general education of all pupils. The suggestion

that such skills and concepts can be imparted after leaving school seems to be based on traditional conceptions in which vocational education was limited to basic crafts which could be easily acquired on the job.

Fieldwork findings seem to disprove the commonly held notions about vocational education. Although pupils' high educational and career aspirations were consistent with the arguments from literature, pupils still aspired to technical occupations related to their NFC courses. Teachers and Education Officers were positive about the NFC, even though they were sceptical about the opportunities existing in the formal employment sector. There were conflicting views regarding what pupils, teachers and Education Officers perceived as the goals of the NFC and how useful they thought it was in meeting the different objectives. Although the vocationalisation model emanating from the 1986 Education Plan (Chart 1) is still at an embryonic stage, it seems to be more promising than previous vocational education programmes. The next chapter provides an overview and draws the main conclusions of the study.

Chapter 8: Discussion and main conclusions

8.1 Introduction

This chapter outlines the main arguments and conclusions of the study. The study examines whether the 'vocational fallacy' is a viable proposition in relation to recent attempts to vocationalise secondary education in Zimbabwe. The term 'vocational fallacy' is used here in reference to views suggesting that rather than vocationalising curricula, schools should concentrate more on the provision of academic education. The study examines the main issues emerging from the vocationalisation debate since the 1960s, particularly following Foster's (1965b) 'vocational school fallacy'. Focusing on Zimbabwe as a post-colonial state, it examines the apparent conflict between its persistent attempts to vocationalise secondary education and the increasing empirical evidence and literature emerging internationally suggesting that such attempts are futile.

While the issues from this discourse are many and varied, the main concern of the study is the growing consensus that schools should concentrate on academic subjects and leave the provision of vocational skills to the workplace. However, as pointed out in chapter 6, in post-colonial countries like Zimbabwe vocationalisation policies have been motivated by the fact that existing curricula are already too academic and mainly cater for the needs of a minute proportion of pupils who proceed to higher and further education. The inherited economic system promotes elitist education in which theoretical knowledge is regarded as distinct and superior to practical activities. The majority of pupils leave the formal system after secondary education. It is therefore necessary to provide them with a balanced curriculum that includes both academic and vocational

education to give them wider options in future. Pupils should not have to make choices between academic and vocational education but should be able to take options within these subjects.

It is the contention of this study that while empirical evidence showing poor labour market outcomes in different countries seems to support the vocational fallacy, the factors underlying the outcomes are not apparent from such evidence. The current study employs both theoretical and empirical approaches in its investigation. Through a critique of the economic and sociological perspectives, chapter 4 examines the socioeconomic and political factors which seem to influence vocationalisation of secondary education. The empirical investigation examines the imperatives underlying the current vocationalisation policy in Zimbabwe and how it was perceived at school level.

8.2 Summary

The context and legacies that seem to influence educational provision in Zimbabwe are provided through an overview of colonial education policies in chapter 2. The literature review examines the issues emerging from the vocationalisation debate, especially with regard to post-colonial developing countries. The theoretical discussion examines the economic and sociological perspectives which have been implicit in the vocationalisation debate. It focuses on the human capital, educational reproduction and the conflict theories in an attempt to identify the socioeconomic and political factors which seem to influence the provision and outcomes of school-based vocational education. Fieldwork data were generated to examine the imperatives underlying the introduction of the

current vocationalisation policy in Zimbabwe. The empirical investigation focuses on the context of the ZNCC and NFC pilot schemes and the perceptions of pupils, teachers, headmasters and Ministry officials regarding the vocationalisation pilot scheme. The perceived goals of the NFC are examined in relation to the educational and career aspirations of pupils following the programme and also as depicted in the vocational fallacy. The empirical data reported in chapter 7 address the premise of the vocational fallacy suggesting that the goals of vocational education programmes tend to contradict the educational and career aspirations of pupils. It also addresses the sociological claim that vocational education is mainly intended for pupils from lower socioeconomic backgrounds to inhibit their educational and career aspirations and labour market prospects. Taking into account the socioeconomic and the political context and imperatives which seem to influence educational provision, the study concludes by assessing whether the 'vocational fallacy' is a viable proposition in relation to recent attempts to vocationalise secondary education in Zimbabwe.

8.3 Discussion

Although extensive literature supporting the 'vocational fallacy' has emerged internationally as revealed in the literature survey in chapter 3, both developing and developed countries continue to emphasise the provision of vocational education as part of schooling. In Zimbabwe, the introduction of the Education With Production (EWP) discussed in chapter 2, the 1986 Education Plan and the subsequent ZNCC and NFC pilot schemes described in chapter 6 illustrate the persistent interest in vocationalisation policies. The interest has been particularly reinforced by the paradoxical situation in which acute shortages in skilled areas continue to exist while school-leaver

unemployment escalates. Post-independence vocational education in Zimbabwe is not limited to the preparation of a semi-skilled workforce but is also intended to create an endogenous technical and technological capability at professional levels. As discussed in chapter 6, the imperatives influencing vocationalisation policies include economic, ideological and political. In spite of the failure of the EWP as a pilot scheme, the 'marrying of theory and practice' has remained a guiding principle in educational reform policies, even though the concept remains elusive to the implementers. This is perceived as a means to enable more people to participate in economic development and transform the inherited economic system along more egalitarian lines. Vocational education is intended to rectify the imbalances created through colonial policies in which Africans were kept out of production systems through education and training policies which prevented them from becoming highly skilled.

Internationally, increasing empirical evidence and literature has emerged confirming that vocationalising school curricula will not meet its intended goals. It is argued in this study that the goals of vocational education are so diverse that such a conclusion cannot be generalised. The perceptions and intended goals of vocational education vary in relation to specific socioeconomic and political contexts. It is argued in chapter 4 that the vocational fallacy is mainly based on economic arguments based on capitalist production systems in which participation is limited to a privileged few. The empirical evidence showing poor labour market outcomes of vocational education does not explain the dysfunctions in the economic systems and irregularities in recruitment practices. It does not take into account the need to transform the inherited economic systems and development strategies in post-colonial states like Zimbabwe where gross imbalances in

economic benefits remain along racial lines and favour a minority of the population.

However, the vocational fallacy appears indisputable if one accepts the premises on which it is based without further analysis. As illustrated by the empirical evidence from developing countries often cited in literature, vocational education is generally more costly than academic. It has not reduced school-leaver unemployment and its contribution to economic development in the short term are not apparent. Attempts to use vocational education as a means to distract pupils from aspiring to higher education and professional occupations or curb the migration of school-leavers to urban areas have been unsuccessful. In situations where pupils have to choose between academic or vocational education, they tend to choose academic subjects. This is however influenced by the reward structures of the economic system and does not necessarily indicate a disdain for vocational education as often implied in literature.

Viewed from the functionalist perspective in which economic requirements determine educational provision (section, 4.6), and regarding the economic systems inherited by post-colonial states as given, the 'vocational fallacy' is a truism. It becomes unnecessary to provide skills beyond the requirements of the productive sector. The main concern then is not what school leavers need for economic survival but what school leavers are needed by the economic system. Colonial education in Zimbabwe reflecting such a view resulted in most African children either out of school or educated below their potential. Such policies sought to promote just a few people while excluding the majority from participating in economic activities.

Empirical evidence from developing countries has shown how the provision of vocational education is constrained by factors such as inadequate financial and material resources, workshop facilities and equipment, time allocated for practical work, teachers who are under-qualified and lack industrial experience, negative attitudes towards vocational subjects and the low status attached to vocational qualifications in relation to academic (Urevbu, 1984; Sifuna, 1992; Lauglo and Lillis, eds., 1988). Citing such evidence, critics have concluded that schools do not have the necessary infrastructure to impart skills that meet the requirements of industry and should therefore concentrate on academic rather than vocational education.

It would appear then that the evidence confirming the 'vocational fallacy' is overwhelming and therefore conclusive. However, the flaws of such evidence are apparent once the *premises* on which they are based and the *goals* of vocational education are reviewed in relation to specific situations and the socioeconomic and political contexts. As La Belle (1975) observes in a critique of Foster's (1975) vocational fallacy in relation to Papua New Guinea, "In order to address Foster, ...one has to accept the kind of evidence he presents in terms of the goal specified or change both premise and goal" (p. 414).

The literature survey in chapter 3 reveals that the vocational fallacy is mainly based on economic views particularly influenced by empirical evidence from rate-of-return analyses such as (Psacharopoulos and Loxley, 1985). Such evidence suggests that the costs of vocational education are not matched with its private and social returns. However, it is argued in the current study that evidence based on outcomes without

examining the factors influencing them is inconclusive. The socioeconomic and political factors underlying educational provision were examined through a critique of the conflicting economic and sociological views in chapter 4. From a broader perspective relating vocational education to economic development and social change in post-colonial states, the chapter discussed the controversy concerning the extent to which educational provision should be or is determined by economic requirements. Based on Max Weber's social analysis, the conflict theory and credentialism of Collins (1977 and 1979) cast doubts on the empirical evidence relating labour market outcomes to the types of education school leavers possess (section, 4.6).

The contemporary human capital views of Brown and Lauder (1992) discussed in section 4.7 highlight the inappropriateness of elitist education systems based on the selection of a few and exclusion of the majority of the population from economic activities. It is the contention of the current study that an education system that combines both theoretical and practical activities is necessary in order to change from the colonial 'elitist' to post-independence 'mass oriented' development strategies. If economic systems in post-colonial states like Zimbabwe are to benefit the majority of the population as they should, it follows then that more people should participate in economic activities. Vocational education should therefore not only be regarded as a preparation for employment but for the empowerment of the majority of school leavers who are not absorbed by the formal sector. It should enable the creation of alternative production systems. From this perspective, school curricula for all pupils should include both academic and vocational subjects. Such curricula should emphasise problem-solving and versatility rather than mastery of specific skills aimed at meeting the

immediate needs of employers. As discussed in chapter 3, broader conceptions of education and learner oriented approaches can be traced back to scholars like John Dewey who advocated science-oriented approaches in which discovery and problem-solving were central features of school learning. In Zimbabwe, polytechnic education on which the EWP concept is based and which was also reiterated in the New Content and Structure of Education of 1986 reflects similar views of bridging the gap between theory and practice. From this view, manual and academic activities are complimentary rather than alternative forms of education.

Vocational education should not only be regarded as a means to meet the needs of employers, but also as a way to broaden the educational and career opportunities for all pupils. It is contended in the present study that while taking cognisance of both short and long term economic requirements of a country, the provision of vocational education should not be limited to the immediate requirements of industry. Where post-school opportunities exist in the informal sector, the mastery of specific vocational skills in addition to their academic education might be desirable for the majority of pupils leaving school at the end of their secondary education. Although such education has been rejected previously, it is the contention of the current study that it is because it was offered as an alternative rather than to complement academic. The concept of village industries which was reflected in colonial vocational education policies in Zimbabwe (chapter 2) was mainly rejected because it was intended and perceived to inhibit the aspirations of African children. Based on his experience in Ghana, Foster (1965a,b) observes that the issue is not that pupils dislike vocational education or manual occupations, rather their choices are influenced by the availability of opportunities and

the reward structures in the economic system.

Vocational education tends to be looked down upon when it is provided as a 'lower' education mainly for the less able or pupils from lower socioeconomic backgrounds. This is reinforced by the fact that such education is often limited to basic craft skills as a preparation for semi-skilled occupations which do not lead to any viable opportunities. In Zimbabwe, while pupils might resent crafts like weaving, pottery and basket making intended to prepare them for self employment, they accept apprenticeship training in motor mechanics, electronics, draughtsmanship and other technical trades in which economic rewards are apparent. It is premised in the current study that even these crafts would be readily accepted if they led to lucrative opportunities. While such skills might be outmoded for the formal sector and would not improve employment opportunities, they could still provide an alternative for the majority of pupils who are not absorbed by the formal sector.

Preparation for the informal sector should not only be limited to the provision of basic crafts but could also include science-based technological activities for pupils with the aptitude for scientific and mathematical concepts and have an interest in such activities. The growing informal 'industry' (commonly referred to in the Shona language as '*siya so*' which means 'leave us alone') particularly in urban areas shows the potential for an alternative production system. This sector is expanding rapidly as unemployment levels continue to rise. Many people made redundant through the Economic Structural Adjustment Programme (ESAP) measures of economic austerity are already finding their way into the '*siya so*' industry. The range of activities is endless and includes arts and

crafts, wood and stone sculpture, furniture manufacturing, vehicle maintenance and electrical repairs. Although it remains largely informal, the 'siya so' industry is already posing a challenge to the formal sector by offering similar, if not more varied services at a fraction of the costs. Strengthening the informal sector as an alternative production system therefore seems a viable proposition and is already becoming popular among school leavers facing the realities of the economic life. However, responses in chapter 7 showed that self-employment was unpopular among pupils taking the NFC courses. Even if the formal sector was to expand as envisaged through ESAP, mass unemployment remains certain due to the limited employment opportunities. It is the contention of the current study that given the necessary support in financial, management and training requirements, this alternative production system holds the future for the Zimbabwean economy and the majority of school leavers.

Although the focus of the current study is on secondary education, the development of alternative production systems provides a framework for analysing the vocationalisation of school curricula in a post-colonial country like Zimbabwe. From this perspective, the concern is not only to meet the immediate requirements of the formal sector but to seek ways of democratising production and economic activities. The vocational fallacy is based on maintaining existing economic structures rather than transforming them and is therefore not a viable proposition for such a post-colonial state. While educational provision is not only to meet economic needs but includes pedagogical considerations as discussed in chapter 3 and reiterated earlier in the current chapter, the induction of all pupils to work related skills through technical, vocational and other practical subjects remains crucial.

8.4 Main conclusions

The current study addresses the question whether the vocational fallacy is a viable proposition in relation to recent attempts to vocationalise secondary education in Zimbabwe. In highlighting the main conclusions for the study it is necessary to point out that the issues emerging from the vocationalisation debate are many and varied. Previous studies have tended to select specific premises arising from the vocationalisation debate and examine them using empirical approaches. Most of these studies have been carried out by educational economists who have naturally taken an economic bias. The current study attempts to examine the vocational fallacy as a theme rather than select issues arising from it separately. The concern of the current study is the growing consensus that vocational education should not be emphasised as part of secondary schooling but more stress should be in the provision of academic subjects.

It is the contention of the current study that the issues surrounding the vocational fallacy are due to the conflicting perceptions in which such education is regarded. In advanced capitalist economic systems such as the United Kingdom, vocational education has traditionally been associated with pupils from lower socioeconomic backgrounds to prepare them for semi-skilled roles in the formal sector production. This is the model that was adopted for African children during the colonial period and was resented by both parents and pupils in Zimbabwe as discussed in chapter 2. Such vocational provision was criticised by educational sociologists for promoting social class disparities (chapter 4, section 4.4). The conflicting economic and sociological perspectives discussed in chapter 4 help explain the issues surrounding the vocational fallacy. The empirical evidence supporting the vocational fallacy becomes less convincing if viewed

from a broader perspective taking into account the different socioeconomic and political contexts under which vocational education is provided. However, these perspectives do not address educational provision in post-colonial states attempting to transform the inherited economic systems in which vocational education is not necessarily seen in terms of meeting the needs of employers or as a means of social class reproduction. It is the contention of the current study that the vocational fallacy is premised on prevailing capitalist production systems which are based on 'low-participation' and therefore exclude the majority of the population.

Given the socioeconomic and political contexts of Zimbabwe as a post-colonial state, the imperatives to vocationalise school curricula are overwhelming (chapter 6). School leaver unemployment remains one of the main factors compelling post-independence attempts to vocationalise school curricula. While approximately 200,000 pupils leave school every year most of them with four years of secondary education, over eighty percent of them have no prospects for higher education, post-school training or employment. After the scrapping of the F2 schools, secondary education remains almost exclusively academic. While the capacity of tertiary institutions continues to increase, the formal employment sector has remained static. The world-wide economic recession and the IMF prescribed Structural Adjustment Programme (ESAP) have attributed to the current economic stagnation and the anticipated benefits of ESAP remain to be seen. However, colonial practices in which the economic system was a preserve of a privileged few, mainly based on racial lines have also added to the limited capacity of the economic system.

It is apparent from this situation that school-leaver unemployment is not due to pupils' lack of skills or qualifications. Pupils' responses reported in chapter 7 showed that their educational aspirations were generally higher than the entry requirements of the occupations they aspired to. Realising the limited employment opportunities and the stiff competition for jobs, pupils aspire to increasingly higher qualifications as discussed in section 4.6 of the current study. However, even students leaving tertiary institutions with vocational qualifications are failing to secure employment because employment opportunities are limited. At most, higher credentials will give individual pupils more chances as they compete for the limited opportunities in the formal sector but will not increase the number of jobs. This would seem to confirm the vocational fallacy view that vocationalising education does not increase employment opportunities and should therefore be left to employers who know how many people they require in particular skilled areas.

While vocational education is intended to prepare pupils for economic survival, this tends to be misconstrued as providing pupils with skills that meet the requirements of employers. The statistics cited earlier in the current section show how this is an inappropriate assumption since the number of pupils who need employment exceeds the maximum capacity of the formal employment sector in its present structure. Attempts to solve school leaver unemployment by articulating schooling to the needs of employment is therefore as inappropriate as stressing academic education only as if all pupils will proceed to higher and further education. It is the contention of the current study that post-colonial countries like Zimbabwe need to conceptualise vocationalisation as an education for empowerment rather than employment.

Fieldwork findings from the ZNCC and the NFC pilot schemes seem to disprove the commonly held notions about vocational education. Although pupils' high educational and career aspirations were consistent with the arguments from literature, pupils still aspired to technical occupations related to their NFC courses. There were conflicting views regarding what pupils, teachers and Education Officers perceived as the goals of the NFC and how useful they thought it was in meeting the different objectives. Teachers and Education Officers were positive about the NFC, even though they were sceptical about employment opportunities existing in the formal sector.

The contention of the current study is that the poor labour market outcomes of school-based vocational education programmes in post-colonial developing countries is mainly due to the exclusive nature of the inherited capitalist economic systems. Also, policy makers tend to continue to perceive vocational provision in terms of meeting the skill requirements of the formal sector, thereby confirming the vocational fallacy. The central role given to the needs of employers is apparent in the views leading to the 1986 Education Plan described in chapter 6 and the current NFC pilot scheme.

However, vocational education has a crucial role to play in the protracted transformation of the colonial legacies, consolidation of 'independence' and the creation of a more egalitarian society. There is a need to change from the prevailing notions of 'education for employment' to 'education for empowerment' in which the provision of vocational education is not limited to the demands of the formal sector but also leads to alternative productive systems. It is necessary to relate specific goals to the type of vocational provision, the pupils involved and specificity of skills imparted. This study concludes

that the 'vocational school fallacy' has been too readily inscribed as an epitaph to the 'vocationalisation debate' without considering the socioeconomic and political factors that seem to influence the provision and outcomes of school-based vocational education.

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Pupils' Questionnaire

Section I: General background information about yourself.

1. What is your name?.....

2. Are you Male? [] 1

Or Female [12

3. How old are you?

14 years old or less []1

15 years [12]

16 years []3

17 years []4

Over 17 years old [15

Appendix 1:2

4. Who pays your school fees?

- | | |
|----------------------------|------|
| Both parents | []1 |
| Father only | []2 |
| Mother only | []3 |
| Elder brother or sister | []4 |
| Others (please state)..... | |

5. Where do you stay during most of your school holidays?

- | | |
|-------------------------------------|------|
| Small town (Kadoma, Masvingo, etc.) | []1 |
| Large city (Harare, Bulawayo, etc.) | []2 |
| Rural area | []3 |
| Commercial farming area | []4 |
| Other (please state where)..... | |

6. With whom do you usually stay during the school holidays?

- | | |
|----------------------------|------|
| Both parents | []1 |
| Father only | []2 |
| Mother only | []3 |
| Elder brother or sister | []4 |
| Others (please state)..... | |

Appendix 1:3

7. What is your father's highest educational qualification?

- | | |
|---|------|
| Primary education | []1 |
| Zimbabwe Junior Certificate (ZJC) | []2 |
| 'O' Level Certificate | []3 |
| 'A' Level Certificate | []4 |
| University Degree | []5 |
| Other (please state level reached)..... | |

8. What is your mother's highest educational qualification?

- | | |
|---|------|
| Primary education | []1 |
| Zimbabwe Junior Certificate (ZJC) | []2 |
| 'O' Level Certificate | []3 |
| 'A' Level Certificate | []4 |
| University Degree | []5 |
| Other (please state level reached)..... | |

9. What does your father do for a living? (If he is self-employed, please state what he does. Also, state if he is a peasant farmer)

10. What does your mother do for a living? (If she is self-employed, please state what she does. Also, state if she is a peasant farmer).....

Appendix 1:4

11. If your fees are paid by a guardian, please state what he or she does for a living.....

12. In what area did you last attend your primary school?

Small town (Kadoma, Masvingo, etc.) []1

Large city (Harare, Bulawayo, etc) []2

Rural area []3

Commercial farming area []4

Other (please state where).....

13. For how long have you been at the present school?

1 year or less []1

2 years []2

3 years []3

4 years []4

Over 4 years []5

14. Did you attend another secondary school before coming here?

Yes []1

No []2

If Yes, why did you leave that school to come and attend here?.....

Appendix 1:5

Section II: *Information about your career hopes and personal views about the Zimbabwe National Foundation Certificate (ZNFC).*

Note:- *Please write down your answers in the spaces provided and tick in the brackets [...], where appropriate.*

15. From the following list, show your level of interest in each of the subjects by ticking [] in the appropriate brackets. **You should only tick the subjects that you are currently studying.**

	<i>[1]</i>	<i>[2]</i>	<i>[3]</i>
	<i>Not</i>	<i>Somewhat</i>	<i>Most</i>
	<i>interested</i>	<i>interested</i>	<i>interested</i>
English Language	[...]	[...]	[...]
English Literature	[...]	[...]	[...]
Shona	[...]	[...]	[...]
General Science	[...]	[...]	[...]
Physics	[...]	[...]	[...]
Chemistry	[...]	[...]	[...]
Geography	[...]	[...]	[...]
Mathematics	[...]	[...]	[...]
History	[...]	[...]	[...]

Appendix 1:6

	<i>[1]</i> <i>Not</i> <i>interested</i>	<i>[2]</i> <i>Somewhat</i> <i>interested</i>	<i>[3]</i> <i>Most</i> <i>interested</i>
Bible Knowledge	[...]	[...]	[...]
Cabinet Making (ZNFC)	[...]	[...]	[...]
Metalwork ('O' Level)	[...]	[...]	[...]
Machine Shop Eng. (ZNFC)	[...]	[...]	[...]
Motor Mechanics (ZNFC)	[...]	[...]	[...]
Fashion and Fabrics('O')	[...]	[...]	[...]
Textile & Design (ZNFC)	[...]	[...]	[...]
Food and Nutrition ('O')	[...]	[...]	[...]
Catering [ZNFC]	[...]	[...]	[...]
Typing [ZNFC]	[...]	[...]	[...]
Woodwork ('O' Level)	[...]	[...]	[...]
Carpentry and Joinery (ZNFC)	[...]	[...]	[...]
Technical Drawing	[...]	[...]	[...]
Building ('O' Level)	[...]	[...]	[...]
Brick/Blocklaying (ZNFC)	[...]	[...]	[...]
Others (State your ZNFC or 'O' Level subjects if they are not listed above, and tick appropriately).....	[...]	[...]	[...]
.....	[...]	[...]	[...]
.....	[...]	[...]	[...]
.....	[...]	[...]	[...]

Appendix 1:7

16. What two subjects do you like most?

1.....

2.....

Why do you like these subjects?.....

.....

17. What two subjects do you like least or dislike?

1.....

2.....

Please give reasons.....

.....

18. Up to what level do you want to continue with your education?

'O' Level [..]1

'A' Level [..]2

University [..]3

Please give reasons.....

.....

.....

.....

Appendix 1:8

19. What do you want to do after your 'O' Levels?

Work	[...]1
Apprenticeship (e.g. at a Polytechnic)	[...]2
Teacher training (Technical Subjects)	[...]3
Teacher training (Academic Subjects)	[...]4
Train at a commercial college	[...]5
Self-employment	[...]6
'A' Levels	[...]7
Other (please state).....	

.....

20. What job would you like to get after completing your education?.....

.....

21. Why do you like this job?.....

.....

.....

.....

.....

Appendix 1:9

22. What chances of getting the job do you think you stand?

Very high [...]¹

High [...]²

Low [...]³

Very Low [...]⁴

Give reasons for your choice.....

.....

23. Name the subject that you think is most useful in preparing you for the job?

.....

Give reasons.....

.....

24. What minimum educational qualifications do you think are required to get the job?

Primary School Certificate [...]¹

Z J C [...]²

'O' Level Certificate [...]³

'A' Level Certificate [...]⁴

University Degree [...]⁵

Others (please state).....

Appendix 1:10

25. If you don't get the job you want, what other job would you consider getting?

.....

Give reasons for your choice.....

.....

26. What job would your parents / guardians wish for you?.....

.....

Why do you think they would like you to do this job?

.....

.....

27. In what area would you want to work?

Small town (Kadoma, Masvingo, etc.) []1

Large city (Harare, Bulawayo, etc.) []2

Rural area []3

Commercial farming area []4

Anywhere []5

Other (please state).....

Give reasons for your choice.....

Appendix 1:11

28. Does the school advise you about the different careers or jobs that are available after leaving school?

Yes [...]¹

No [...]²

29. What do you think was considered in deciding which pupils should follow the ZNFC?

Those with the best mid-year/ZJC results [...]¹

Those with moderate mid-year/ZJC results [...]²

Those with the lowest mid-year/ZJC results [...]³

Only those who are interested in the ZNFC [...]⁴

Others (please specify).....

.....

Appendix 1:12

30. Tick in the brackets [...], to show the extent to which you think the ZNFC fulfils the following goals?

	<i>[1] Not interested</i>	<i>[2] Somewhat interested</i>	<i>[3] Most interested</i>
(a) Preparing pupils for employment	[...]	[...]	[...]
(b) Preparing pupils for apprenticeship	[...]	[...]	[...]
(c) Developing a positive attitude towards manual work	[...]	[...]	[...]
(d) Preparing pupils for self employment	[...]	[...]	[...]
(e) Applying theoretical knowledge practically	[...]	[...]	[...]
Others (please specify below)			
.....	[...]	[...]	[...]
.....	[...]	[...]	[...]

31. Does the school arrange for pupils to get some work experience, e.g. through industrial or farm attachments?

Yes [..]1

No [..]2

Appendix 1:13

32. Does the school have careers guidance for pupils?

Yes

[...]1

No

[...]2

33. What do you think are the main strengths of the ZNFC?

.....

.....

34. What do you think are the main weaknesses of the ZNFC?

.....

.....

35. Please write down any further comments you wish about the

ZNFC:.....

.....

.....

.....

.....

.....

.....

Appendix 1:14

Section III: *The statements below express views about education and work which you may agree or disagree with. Please show your level of agreement or disagreement with the statements by putting a circle, e.g. (SA A U D SD) around the letters that best express your opinion. There are no right or wrong answers since I am asking for your personal opinion. If any statement is not clear to you, please ask. The letters stand for:*

SA = Strongly Agree

A = Agree

U = Undecided D = Disagree

SD = Strongly Disagree

36. Both able and less able pupils should

do the ZNFC.

SA A U D SD

37. Pupils doing the ZNFC subjects in this

school are those who got low grades

in Form II.

SA D U D SD

38. Pupils who have done the ZNFC find jobs

more easily than those who did 'O' Level

subjects only.

SA A U D SD

39. Pupils who are less able need to do more

practical subjects than those who are more

able at school.

SA A U D SD

Appendix 1:15

40. People who have done the ZNFC get lower-paying jobs than those who did 'O' Level subjects only.	SA	A	U	D	SD
41. Pupils at this school are free to choose whether or not they want to do the ZNFC.	SA	A	U	D	SD
42. There should be more ZNFC subjects to choose from in this school.	SA	A	U	D	SD
43. The ZNFC is easier to pass than the 'O' Level subjects.	SA	A	U	D	SD
44. The time to do the ZNFC should be increased on the timetable.	SA	A	U	D	SD
45. There are enough facilities (e.g. workshops & tools) at this school for the ZNFC course.	SA	A	U	D	SD
46. I like jobs in which I wear overalls, boots, helmets, etc.	SA	A	U	D	SD
47. Practical subjects are less interesting than academic subjects.	SA	A	U	D	SD
48. Practical subjects demand as much thinking as academic subjects.	SA	A	U	D	SD
49. Employers prefer people who have done both academic and practical subjects at school.	SA	A	U	D	SD
50. I don't like doing the ZNFC.	SA	A	U	D	SD

THANK YOU FOR COMPLETING THE QUESTIONNAIRE

Please add any other comments you might wish to make regarding the NFC course or the 'O' level practical subject that you are studying.

Appendix 2:1

TEACHERS' QUESTIONNAIRE

My name is Charles Nherera. I am a research student at the University of London, in the Institute of Education. This questionnaire is intended to collect information for the research project I am carrying out concerning vocational education in secondary schools. Please answer all questions as frankly as possible. Your names will be kept confidential and no reference will be made to them in the report.

Please tick in the brackets and comment in the spaces provided.

1. Name.....

2. Gender: Male [...]¹

Female [...]²

3. Age: Below 19 years of age [...]1

19 - 23 [...]2

24 - 28 [...]³

29 - 33

34 - 38 [...]5

39 - 43

[...]6

44 - 48 [...]⁷

49 - 53 [..]8

Above 53 years of age [...]¹⁹

Appendix 2:2

4. For how long have you taught technical/vocational subjects?

Less than 1 year	[...]1
1 - 5 years	[...]2
6 - 10 years	[...]3
11 - 15 years	[...]4
16 - 20 years	[...]5
21 - 25 years	[...]6
Over 25	[...]7

5. Why did you take up the teaching of technical / vocational subjects as a career?

.....

.....

6. What is your overall teaching experience (in both academic and vocational subjects)?

Less than 1 year	[...]1
1 - 5 years	[...]2
6 - 10 years	[...]3
11 - 15 years	[...]4
16 - 20 years	[...]5
21 - 25 years	[...]6
Over 25	[...]7

Appendix 2:3

7. Besides teaching, what other working experience do you have? (include any industrial attachments):

Position held.....Period.....years.

Position held.....Period.....years.

Position held.....Period.....years.

Position held.....Period.....years.

8. Where did you train as a teacher?

Gweru Teachers College [..]1

Belvedere Teachers College [..]2

United College of Education [..]3

Mutare Teachers College [..]4

Others (please specify).....

9. What was your major subject?.....

10. Do you have any other professional/technical qualifications, such as apprenticeship training?

Yes [..]1

No [..]2

If yes please state the qualifications.....

Appendix 2:4

11. For how long have you been at the present school?

Less than 1 year	[...]1
1 - 5 years	[...]2
6 - 10 years	[...]3
11 - 15 years	[...]4
16 - 20 years	[...]5
21 - 25 years	[...]6
Over 25 years	[...]7

12. What position do you currently hold within the school:

Ordinary teacher	[...]1
Head of Department	[...]2
Senior Master	[...]3
Deputy Headmaster/mistress	[...]4
Headmaster/mistress	[...]5
Others (please specify).....	
.....	
.....	

Appendix 2:5

13. State any technical / vocational qualifications that you have (including any Trade Tests) and when you obtained these:

Qualification	Year
.....
.....
.....

14. What is your highest academic qualification?

ZJC	[...] ¹
CSC /‘O’ Level / Grade 11 (eleven)	[...] ²
‘A’ Level	[...] ³
B.A. / B.Sc.	[...] ⁴
M.A. / M.Sc.	[...] ⁵

Others (please specify).....

15. What is your highest professional qualification?

Primary Teachers Certificate	[...] ¹
Secondary Teachers Certificate	[...] ²
B.Ed. / B.Sc.	[...] ³
M.Ed. / M.Sc.	[...] ⁴
Others (please specify).....	

Appendix 2:6

16. Which Zimbabwe National Foundation Certificate (ZNFC) subject(s) are you currently teaching?

Carpentry and Joinery [..]1

Machine Shop Engineering [..]2

Bricklaying / Blocklaying [..]3

Catering [..]4

Horticulture [..]5

Textiles [..]6

Others (please specify).....

17. How many periods per week are allocated for the ZNFC subject?.....periods.

18. What other subjects are you currently teaching?

Subject	Classes	Periods Per Week
.....
.....
.....
.....
.....

Appendix 2:7

19. Indicate the degree to which you think the ZNFC syllabus differs from the 'O'

Level syllabus.

Very different [..]1

Slightly different [..]2

Not different [..]3

20. Give reasons for your choice.....

.....

21. From your experience, what can you say about the relationship between the syllabuses followed in the ZNFC subjects and the requirements of the employment sector:

There is a very strong relationship [..]1

There is a slight relationship [..]2

There is no relationship [..]3

Give reasons for your choice.....

.....

.....

.....

.....

Appendix 2:8

22. How are pupils selected for the ZNFC?

Those with the best mid-year/ZJC results [...]1

Those with moderate mid-year/ZJC results [...]2

Those with the lowest mid-year/ZJC results [...]3

Only those who are interested in the ZNFC [...]4

Others (please specify).....

Please comment on this method of selection?.....

.....

.....

23. What do you regard as the major strengths of the ZNFC?.....

.....

24. What do you regard as the major weaknesses of the ZNFC?

.....

.....

.....

.....

.....

.....

Appendix 2:9

25. What improvements would you suggest for the ZNFC?

.....

.....

.....

.....

.....

.....

26. Who made the ZNFC syllabus that you are using?

.....

27. Do you think the ZNFC is an improvement on the ZNCC?

Yes [..]1

No [..]2

Please give reasons for your choice.....

.....

28. Do you adhere strictly to the ZNFC syllabus?

Yes [..]1

No [..]2

Please give reasons.....

.....

Appendix 2:10

29. Indicate by ticking appropriately, the extent to which the ZNFC fulfils the following objectives?

	<i>[1]</i> <i>Very</i> <i>useful</i>	<i>[2]</i> <i>Just</i> <i>right</i>	<i>[3]</i> <i>Not</i> <i>useful</i>
(a) Preparing pupils for employment	[...]	[...]	[...]
(b) Preparing pupils for apprenticeship	[...]	[...]	[...]
(c) Developing a positive attitude towards manual work	[...]	[...]	[...]
(d) Preparing pupils for self employment	[...]	[...]	[...]
(e) Applying theoretical knowledge practically	[...]	[...]	[...]
Others (please specify).....	[...]	[...]	[...]
.....	[...]	[...]	[...]

30. Does the school arrange for pupils to get some work experience, e.g. through industrial or farm attachments?

Yes [..]1

No [..]2

Please comment further.....

.....

.....

Appendix 2:11

31. Does the school provide career guidance to pupils?

Yes [..]1

No [..]2

Please comment.....

.....

32. Does the school assist the ZNFC pupils in getting employment at the end of their school life?

Yes [..]1

No [..]2

Please comment.....

.....

.....

.....

33. Please write down any further comments you wish to make about the ZNFC.

Continue on the provided blank sheet if you wish.

.....

.....

.....

Appendix 2:12

.....

.....

.....

.....

.....

.....

Thank you for your kind cooperation.

#####

Appendix 3:1

E. Os'. QUESTIONNAIRE

My name is Charles Nherera. I am a lecturer in the Department of Technical Education, at the University of Zimbabwe. This questionnaire is intended to collect information for the research I am carrying out concerning vocational education in secondary schools. Please answer all questions as frankly as possible. Your anonymity is absolutely guaranteed.

Please tick in the brackets and fill in the spaces provided.

- | | | |
|-----------------------------------|------------------------|--------|
| 1. Name of Education Officer..... | | |
| 2. Gender: | Male | [...]1 |
| | Female | [...]2 |
| 3. Age: | Below 26 | [...]1 |
| | 26 - 30 | [...]2 |
| | 31 - 35 | [...]3 |
| | 36 - 40 | [...]4 |
| | 41 - 45 | [...]5 |
| | 46 and above | [...]6 |
| 4. Teaching experience: | | |
| | No teaching experience | [...]1 |
| | Less than 1 year | [...]2 |
| | 1 - 5 years | [...]3 |
| | 6 - 10 years | [...]4 |
| | 11 - 15 years | [...]5 |
| | 16 - 20 years | [...]6 |
| | 21 years and above | [...]7 |

Appendix 3:2

5. If applicable, please state where you trained as a teacher?.....

.....

6. For how long have you held the post of Education Officer?years.

7. Which subjects are you responsible for?.....

.....

8. State any other working experience that you have, (including any industrial attachments):

Position held.....Period.....years.

Position held.....Period.....years.

Position held.....Period.....years.

Position held.....Period.....years.

9. For how long you have worked as an E.O. in this Region?.....years.

10. Do you have any other professional / technical qualifications, such as apprenticeship training?

Yes [..]1

No [..]2

If yes please state the qualifications.....

11. What is your highest academic qualification?

CSC / 'O' Level / Grade 11 (eleven) [..]1

'A' Level [..]2

B.A. / B.Sc. [..]3

M.A. / M.Sc. [..]4

Others (Please specify).....

.....

Appendix 3:3

12. What is your highest professional qualification?

Primary Teachers Certificate	[...]1
Secondary Teachers Certificate	[...]2
B.Ed. / B.Sc.	[...]3
M.Ed. / M.Sc.	[...]4
Others (specify).....	

13. Which ZNFC subjects are offered in your Region?

Agriculture	[...]1
Brick and Block Laying	[...]2
Mechanical Engineering	[...]3
Technical Drawing / Graphics	[...]4
Cabinet Making	[...]5
Fashion and Fabrics	[...]6
Food and Nutrition	[...]7
Others (specify).....	

14. State the number of schools offering the following technical / vocational programmes in your Region:

- (a) Zimbabwe Foundation For Education With Production ZIMFEPschools.
- (b) Zimbabwe National Foundation Certificate (ZNFC)schools.

Appendix 3:4

15. Indicate the degree to which you think the ZNFC syllabuses are different from the 'O' Level syllabuses in technical subjects.

Very different	[...]1
Slightly different	[...]2
Not different	[...]3
Not sure	[...]4

16. Explain your choice briefly:.....
.....

17. From your experience, what can you say about the relationship between the ZNFC syllabuses and the world of work?

There is a very strong relationship	[...]1
There is slight relationship	[...]2
There is no relationship	[...]3
You are not sure	[...]4

Please comment further.....
.....

18. Who drew up the ZNFC syllabuses currently being used in your region?
.....

19. How are pupils selected for the ZNFC?.....
.....

Please comment on this method of selection.....

20. What do you regard as the major strength of the ZNFC?.....
.....

Appendix 3:5

21. What do you regard as the major weakness of the ZNFC?.....

.....

22. Do you think the ZNFC is an improvement on the ZNCC (Zimbabwe National Craft Certificate)?

Yes [...]1

No [...]2

Why do you think so?.....

.....

23. Are teachers allowed to make changes to the ZNFC syllabuses?

Strongly agree [...]1

Agree [...]2

Not sure [...]3

Disagree [...]4

Strongly disagree [...]5

Please comment further.....

.....

.....

24. What do you regard as the main objective of the ZNFC? Number the statements 1 - 6 in your own order of preference in the brackets.

To prepare pupils for employment [...]1

To prepare pupils for higher/further education [...]2

To prepare pupils for vocational training [...]3

To develop a positive attitude towards manual work [...]4

To enable pupils to create their own employment [...]5

To apply theoretical knowledge practically [...]6

Please add any more objectives that you consider important.....

.....

.....

.....

Appendix 3:6

25. Do schools arrange for ZNFC pupils to get some working experience, e.g. through industrial or farm attachments?

Yes [...]1

No [...]2

Please comment further.....

.....

26. Do schools provide careers guidance to ZNFC pupils?

Yes [...]1

No [...]2

Please comment.....

.....

27. Do schools assist the ZNFC pupils in finding employment at the end of their school life?

Yes [...]1

No [...]2

Please comment.....

.....

28. Please give your general opinion about the ZNFC.

.....

.....

.....

.....

.....(Please continue overleaf if you wish)

Thank you for your kind cooperation

APPENDIX 4: How pupils perceived the NFC, vocational education and employment prospects

APPENDIX 4.I

Q36 Both able and less able pupils should do ZNFC

Value Label	Value	Frequency	Percent
no response	0	5	2.8
Strongly agree	1	47	26.1
agree	2	42	23.3
undecided	3	23	12.8
disagree	4	41	22.8
strongly disagree	5	22	12.2
		-----	-----
	Total	180	100.0

Mean 2.633 Median 2.000 Std dev 1.457
Valid cases 180 Missing cases 0

Q37 Only less able should do ZNFC

Value Label	Value	Frequency	Percent
no response	0	4	2.2
Strongly agree	1	6	3.3
agree	2	11	6.1
undecided	3	11	6.1
disagree	4	26	14.4
strongly disagree	5	122	67.8
		-----	-----
	Total	180	100.0

Mean 4.306 Median 5.000 Std dev 1.247
Valid cases 180 Missing cases 0

Q38 ZNFC pupils find jobs easier

Value Label	Value	Frequency	Percent
no response	0	6	3.3
Strongly agree	1	49	27.2
agree	2	77	42.8
undecided	3	23	12.8
disagree	4	18	10.0
strongly disagree	5	7	3.9
		-----	-----
	Total	180	100.0

Mean 2.106 Median 2.000 Std dev 1.131
Valid cases 180 Missing cases 0

APPENDIX 4.2

Q39 Less able should do more practicals

Value Label	Value	Frequency	Percent
no response	0	7	3.9
Strongly agree	1	40	22.2
agree	2	48	26.7
undecided	3	30	16.7
disagree	4	30	16.7
strongly disagree	5	25	13.9
		-----	-----
	Total	180	100.0
Mean 2.617 Median 2.000 Std dev 1.447			
Valid cases 180 Missing cases 0			

Q40 ZNFC pupils get lower paying jobs

Value Label	Value	Frequency	Percent
no response	0	3	1.7
Strongly agree	1	2	1.1
agree	2	3	1.7
undecided	3	26	14.4
disagree	4	64	35.6
strongly disagree	5	82	45.6
		-----	-----
	Total	180	100.0
Mean 4.178 Median 4.000 Std dev 1.004			
Valid cases 180 Missing cases 0			

Q41 Pupils choose if they want ZNFC

Value Label	Value	Frequency	Percent
no response	0	5	2.8
Strongly agree	1	36	20.0
agree	2	60	33.3
undecided	3	8	4.4
disagree	4	49	27.2
strongly disagree	5	22	12.2
		-----	-----
	Total	180	100.0
Mean 2.700 Median 2.000 Std dev 1.437			
Valid cases 180 Missing cases 0			

APPENDIX 4.3

Q42 More ZNFC subjects required

Value Label	Value	Frequency	Percent		
no response	0	7	3.9		
Strongly agree	1	63	35.0		
agree	2	73	40.6		
undecided	3	17	9.4		
disagree	4	12	6.7		
strongly disagree	5	8	4.4		
		-----	-----		
	Total	180	100.0		
Mean	1.933	Median	2.000	Std dev	1.127
Valid cases	180	Missing cases	0		

Q43 ZNFC easier than 0 levels

Value Label	Value	Frequency	Percent		
no response	0	6	3.3		
Strongly agree	1	44	24.4		
agree	2	68	37.8		
undecided	3	29	16.1		
disagree	4	20	11.1		
strongly disagree	5	13	7.2		
		-----	-----		
	Total	180	100.0		
Mean	2.289	Median	2.000	Std dev	1.248
Valid cases	180	Missing cases	0		

Q44 ZNFC time should be increased

Value Label	Value	Frequency	Percent		
no response	0	5	2.8		
Strongly agree	1	52	28.9		
agree	2	64	35.6		
undecided	3	22	12.2		
disagree	4	29	16.1		
strongly disagree	5	8	4.4		
		-----	-----		
	Total	180	100.0		
Mean	2.233	Median	2.000	Std dev	1.233
Valid cases	180	Missing cases	0		

APPENDIX 4.4

Q45 ZNFC facilities are enough

Value Label	Value	Frequency	Percent		
no response	0	4	2.2		
Strongly agree	1	43	23.9		
agree	2	48	26.7		
undecided	3	7	3.9		
disagree	4	44	24.4		
strongly disagree	5	34	18.9		
		-----	-----		
	Total	180	100.0		
Mean	2.811	Median	2.000	Std dev	1.549
Valid cases	180	Missing cases	0		

Q46 I like blue collar jobs

Value Label	Value	Frequency	Percent		
no response	0	4	2.2		
Strongly agree	1	33	18.3		
agree	2	32	17.8		
undecided	3	25	13.9		
disagree	4	43	23.9		
strongly disagree	5	43	23.9		
		-----	-----		
	Total	180	100.0		
Mean	3.106	Median	3.000	Std dev	1.519
Valid cases	180	Missing cases	0		

Q47 Prac subjects less interesting

Value Label	Value	Frequency	Percent		
no response	0	5	2.8		
Strongly agree	1	11	6.1		
agree	2	10	5.6		
undecided	3	25	13.9		
disagree	4	69	38.3		
strongly disagree	5	60	33.3		
		-----	-----		
	Total	180	100.0		
Mean	3.789	Median	4.000	Std dev	1.286
Valid cases	180	Missing cases	0		

APPENDIX 4.5

Q48 Prac subjects equally demanding

Value Label	Value	Frequency	Percent
no response	0	4	2.2
Strongly agree	1	31	17.2
agree	2	57	31.7
undecided	3	14	7.8
disagree	4	45	25.0
strongly disagree	5	29	16.1
		-----	-----
	Total	180	100.0

Mean 2.844 Median 2.000 Std dev 1.445
Valid cases 180 Missing cases 0

Q49 Employees prefer academic & practical

Value Label	Value	Frequency	Percent
no response	0	4	2.2
Strongly agree	1	78	43.3
agree	2	62	34.4
undecided	3	22	12.2
disagree	4	10	5.6
strongly disagree	5	4	2.2
		-----	-----
	Total	180	100.0

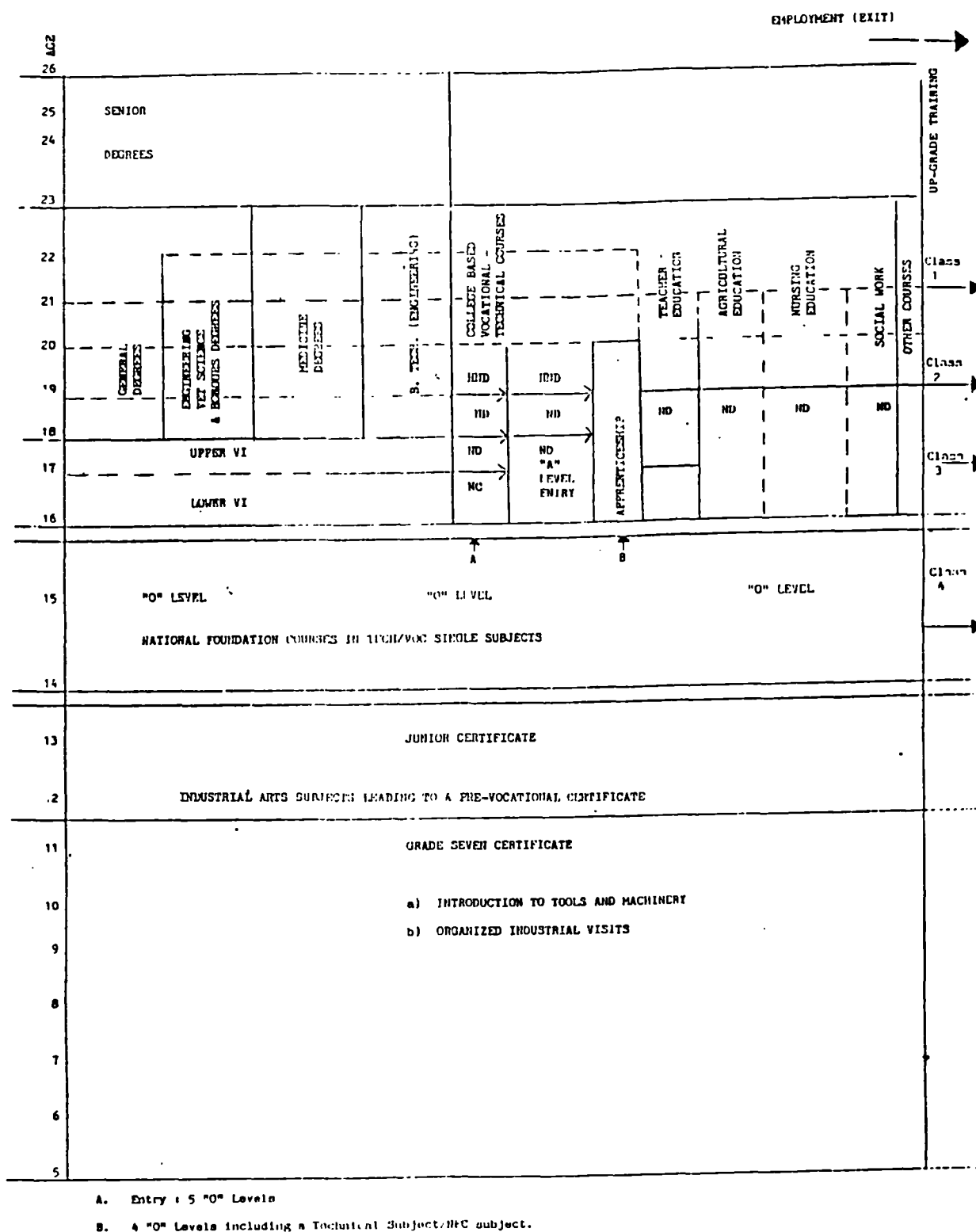
Mean 1.822 Median 2.000 Std dev 1.020
Valid cases 180 Missing cases 0

Q50 I do not like ZNFC

Value Label	Value	Frequency	Percent
no response	0	2	1.1
Strongly agree	1	2	1.1
undecided	3	4	2.2
disagree	4	18	10.0
strongly disagree	5	154	85.6
		-----	-----
	Total	180	100.0

Mean 4.756 Median 5.000 Std dev .767
Valid cases 180 Missing cases 0

Appendix 5: New Structure of post -secondary education system



Source: Ministry of Higher Education unpublished document (1990)

Department of Technical Education
University of Zimbabwe
P.O. Box MP 167
Mount Pleasant
Harare

28 February 1993

The Regional Director
Harare Region
Ministry of Education and Culture
P.O. Box 8335
Causeway
Harare

Dear Sir

Re: Permission To Carry Out Research In Secondary Schools

I am applying for authority to undertake research, concerning vocationalisation of secondary education in your region. I have enclosed a copy of the letter from Head Office, referenced C/426/10, granting me authority to contact your office for the necessary clearance.

I am a lecturer in the Department of Technical Education, at the University of Zimbabwe. Currently, I am pursuing further studies at the University of London, in the Department of International and Comparative Education.

I am now doing my fieldwork research, and am interested in the "vocationalisation of secondary education", particularly The New Structure and Content of Education Pilot Scheme. I would like to visit schools which have implemented both the Zimbabwe National Craft Certificate (ZNCC) and the Zimbabwe National Foundation Certificate (ZNFC), such as Allan Wilson, Mabvuku, St Peters

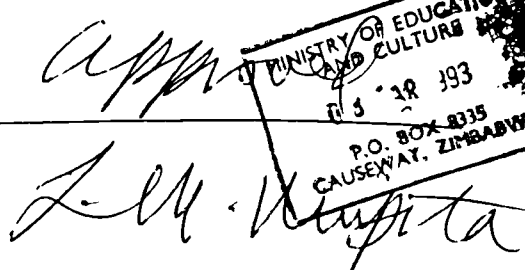
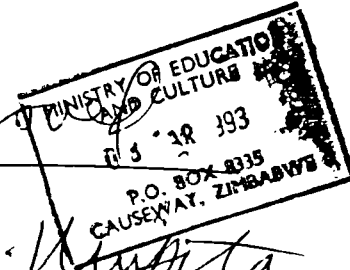
Kubatana and Churchill High Schools. I am also asking for authority to conduct interviews with relevant officers in your region.

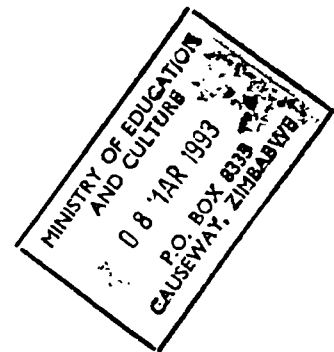
I am hoping to complete the study as a doctoral thesis, towards the end of 1994 and will be most obliged to make my findings available to the Ministry.

Your assistance will be most appreciated.

Yours sincerely


Charles M. Nherera



Appendix 7:

All communications should be addressed to
"The Secretary for Education and Culture"
Telephones: 734050/9, 734060/9 and 734071/5
Telegraphic Address: "EDUCATION"



ZIMBABWE

Reference: C/426/10

MINISTRY OF EDUCATION AND CULTURE
P.O. Box 8022
Causeway
Zimbabwe

19 February 1993

Mr C.M. Nherera
Department of Technical Education
University of Zimbabwe
P.O. Box MP 167
Mt. Pleasant
Harare

PERMISSION TO CARRY OUT RESEARCH ON "VOCATIONALIZATION
OF SECONDARY EDUCATION IN ZIMBABWE"

I refer to your application letter dated 17 February 1993, concerning the above. Permission is hereby granted for you to carry out your research.

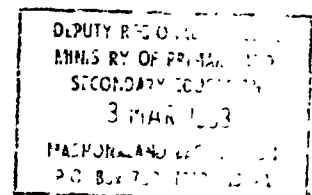
As your focus is on selected schools in Harare and Mashonaland East Regions, we ask you to approach the Regional Directors of these Regions with copies of this letter before you get to the schools.

Finally, the Ministry of Education and Culture would be grateful for a copy of your completed research as this may contain information useful to the Development of Education in Zimbabwe in general and the vocationalization of Secondary Education in particular.

G. Mugadzaweta

J.G. Mugadzaweta
for SECRETARY FOR EDUCATION AND CULTURE.

To HM's (Secondary)
/NM Bearer has permission
to visit your school
on the matter of this
letter.



O.T. Musika

DRD(S)

For Regional Director, Mash Ea.

